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Central Heating Plant Economic Evaluation Program, Volume 5: Emission Regulations Data Management Program

by

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Public Law has directed the Department of Defense (DOD) to rehabilitate and convert its existing domestic power plants to burn more coal. Other Federal legislation requires DOD to use the most economic fuel for any new heating system.

This five-volume report discusses the Central Heating Plant Economic Evaluation Program (CHPECON), a computer program for screening potential new and retrofit steam/power generation facilities.

Volume 1 is the Technical Reference.
Volume 2 is the User's Manual.
Volume 3 is the Military Base Weather Information Data Management Program.
Volume 4 is the Coalfield Properties Information Data Management Program.
Volume 5 is the Emission Regulations Data Management Program.

CHPECON provides screening criteria to evaluate competing combustion technologies using coal, gas, or oil; detailed conceptual facility design information; budgetary facility costs; and economic measures of project acceptability including total life cycle costs and levelized cost of service.

The program provides sufficient flexibility to vary critical design and operating parameters to determine project sensitivity and parametric evaluation.

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Foreword

This study was conducted for the Assistant Chief of Staff for Installation Management (ACS(IM)), Directorate of Facilities and Housing under the Coal Conversion Studies Program, which is administered by the Energy Policy Directorate of the Office of the Assistant Secretary of Defense, Production & Logistics, Energy Policy (OASD P&L/EP). Millard Carr is the Program Manager. Funding was provided under Military Interdepartmental Purchase Request (MIPR) No. W56HZV89-AC-01; Work Units "Coal Conversion Strategies for DOD" and "Enhancement of Existing Models," dated 20 November 1989. The technical monitor was Qaiser Toor, DAIM-FDF-U.

The work was performed by the Fuels and Power Systems Team (FEP), Energy and Utility Systems Division (FE) of the Infrastructure Laboratory (FL), U.S. Army Construction Engineering Research Laboratories (USACERL). Special acknowledgement is given to Lee Thurber, Rama Katz, and Mei-Yi Feng, CECER-FE for their efforts in organizing technical materials. Dr. David M. Joncich is Chief, CECER-FE, and Alan Moore is Acting Chief, CECER-FL. The USACERL technical editor was Gloria J. Wienke, Information Management Office.

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1 Introduction

The fiscal year (FY) 1986 Defense Appropriation Act (Public Law [PL] 99-190 Section 8110) directed the Department of Defense (DOD) to implement the rehabilitation and conversion of central heating plants to coal firing. The target set by this act was 1.6 million short tons* of coal per year above the 1985 consumption level by 1994. The language further stated that 300,000 tons of this amount should be anthracite coal. The purpose of this Section was to offset decreasing anthracite coal use in Germany resulting from U.S. Army, Europe (USAREUR) installations connecting to district heating systems. The FY 1987 Defense Authorization Act (PL-99-661, Section 1205) also directed that the primary fuel source in any new heating system be the most life cycle cost effective. To assist in complying with these acts, the U.S. Army Center for Public Works (USACPW) requested that the U.S. Army Construction Engineering Research Laboratories (USACERL) provide technical studies and support for the Army's Coal Conversion Program.

Objective

The objective of this project is to develop a series of screening and life cycle cost estimating computer models to determine when and where specific coal combustion technologies can be economically implemented at Army central heating plants.

Approach

The approach for providing Coal Conversion Program support has been to develop tools useful for long range utility planning and for evaluating both the technical and economic feasibility of conversion. Cost estimating methods have been developed for building new coal, gas, or oil plants, and for retrofitting existing plants to coal firing capability. Supporting data bases have been developed covering installation-specific data (heating plant inventory, building inventory, weather data, energy usage), environmental regulations, coal supply information, and combustion equipment performance. The plant sizes examined in the model range from 50,000 to 600,000 pounds per hour (lb/hr) with individual boiler sizes from 20,000 to 200,000 lb/hr of

* A metric conversion table is on page 27.

steam or high temperature hot water (HTHW). The program is divided into two parts: the preliminary screening model and the detailed cost model. The screening model is used to initially evaluate each plant site and boiler technology option to produce a list of the promising locations and technology options. The screening model contains five distinct sections for evaluating new heating plants, retrofit heating plants, cogeneration facilities (in base-managed and third-party-managed forms), and consolidation of existing multiple boiler plants.

The new heating plant screening model is used to determine if a new coal fired heating plant can be built to replace an existing steam plant (150 pounds per square inch gauge [psig] saturated steam or equivalent hot water or 250 psig saturated steam). The boiler technology options include: stoker, bubbling fluidized bed, circulating fluidized bed, coal/water slurry, coal/oil slurry, natural gas, and #2 and #6 fuel oils.

The retrofit screening model is used to determine if the existing boilers can be retrofitted to fire coal or low-British thermal unit (Btu) gas supplied from a gasifier. The boiler options include: coal-water slurry, coal-oil slurry, micronized coal, slagging coal, bubbling fluidized bed, and stoker, as well as gasification.

The cogeneration screening model is used to determine if a new cogeneration steam plant is a feasible alternative for a military base heating plant. Medium pressure (600 psig, 750 °F) or high pressure (1300 psig, 1000 °F) plants can be analyzed. The boiler types considered are stoker, coal-oil slurry, coal-water slurry, bubbling fluidized bed, and circulating fluidized bed.

The consolidation screening model is used to determine if the military base should consolidate several individual heating plants into one main heating plant. This section assesses whether the steam distribution density is sufficient to consider consolidation as a practical option.

After the screening model has been executed, the user has the option to quit or to restart another screening model (for another option) or to continue to obtain a cost estimate for the selected facility. The costing model contains sections for a new heating plant, retrofit heating plant, cogeneration facility (base and third party), and consolidated facility.

The costing model provides conceptual facility design, capital installed costs of the conceptual facility, operational and maintenance costs over the life of the conceptual facility, and life cycle costs.

Report Organization

This report discusses the Central Heating Plant Economic Evaluation (CHPECON) program and is divided into the following five volumes:

Central Heating Plant Economic Evaluation Program, Volume 1: Technical Reference.

Central Heating Plant Economic Evaluation Program, Volume 2: User's Manual.

Central Heating Plant Economic Evaluation Program, Volume 3: Military Base Weather Information Data Management Program.

Central Heating Plant Economic Evaluation Program, Volume 4: Coalfield Properties Information Data Management Program.

Central Heating Plant Economic Evaluation Program, Volume 5: Emission Regulations Data Management Program.

System Requirements

CHPECON was developed using an 80286 personal computer with 640K memory, and was run using MS-DOS 3.3. The model should operate satisfactorily on 8088/80286/80386 processors with MS-DOS 2.0 and above. The program is written in dBase III Plus^{*} compatible language with some extensions. To provide the necessary speed and compactness, the program is distributed in compiled form using Nantucket's Clipper^{**} and allows stand-alone operation without requiring additional utilities

Scope

The purpose of this work is to investigate the feasibility of converting Army central heating plants to coal firing. The models developed are generally applicable to industrial or large commercial facilities. The economic evaluation program for screening and life cycle costs will serve as a tool to select and rank potential Army sites for coal conversion.

* dBase III Plus is a registered trademark of Ashton-Tate.

** Clipper is a registered trademark of Nantucket Software.

Mode of Technology Transfer

The CHPECON program may be obtained by contacting the USACERL Fuels and Power Systems Team at 1-800-872-2375, extension 5551. The program will be transferred to Major Army Command Headquarters for further distribution. It is recommended that availability of this program and the information presented in this report be disseminated in a Public Works Technical Bulletin.

2 The EMISSION Program

Installation

The stand-alone nature of EMISSION requires that it be installed as an independent entity before use, even if it will be used only as part of CHPECON. The files are stored on one disk, containing both the programs for EMISSION and the data files. The installation consists of copying the disks to a suitable subdirectory on a hard disk of the computer that will be used. EMISSION will automatically create the index files needed for its operation when first run.

Running EMISSION

To run EMISSION as a stand-alone program, you must know the programs environment.

1. If run under dBASE III or compatible interpreter (like FoxBase^{*}), start dBASE, then enter the command "DO EMISSION", and press the <RETURN> key.
2. If run under a compiled program like Clipper from the DOS prompt (or similar), enter the command "EMISSION", and press the <RETURN> key.

Exiting the program will return you to the level that called the program; the dot prompt if in dBASE or FoxBase and the DOS prompt if in Clipper.

Regulations

This data base program for central heating plant emissions was developed to support an overall program for evaluating the use of coal-fired boilers at continental U.S. Army bases. The EMISSION program (written in dBASE III Plus) provides stand-alone operation and can be merged with the Central Heating Plant Economic Evaluation Program (CHPECON). This stand-alone capability eliminates the need to reinstall all the CHPECON program files when updating the emission files. In support of

* FoxBase is a registered trademark of Fox Software, Inc.

CHPECON, EMISSION maintains the file of Federal, state, and local emission regulations for coal-fired boilers. This file is used to determine if a certain technology proposed for use at a given location would comply with the emission regulations for the region.

Regulations were obtained by contacting each state's Environmental Protection Agency and requesting a copy of the air pollution regulations for central heating plants. Most states responded; the references are listed in the bibliography. In California, no emission regulations govern the entire state; however, the state is divided into 42 counties that have separate rules and regulations. Table 1 lists the counties' mailing addresses. A letter was sent to each county requesting the rules and regulations for coal-fired boilers. A copy of the form letter is presented in Figure 1.

To supplement information gathered from each state, the University of Illinois' Environmental Technical Information System (ETIS) was also used. This system is maintained by the University of Illinois for the U.S. Army Construction Engineering Research Laboratories. This system includes a subsystem called the Computer-aided Environmental Legislative Data System (CELDS), which is a collection of abstracted Federal and state environmental regulations and standards. A computer search examined the CELDS records and retrieved those records that contained the coal-fired boiler regulations. This information was then used in conjunction with the original references to obtain the most recent state and Federal emission regulations. CELDS, however, did not contain any information on the regulations for California's regions. This information was extracted from the material sent by the regional air pollution districts or agencies.

Table 1. Air pollution control counties in California.

Amador County APCD (Mountain Counties Air Basin) 108 Court Street Jackson, CA 95642	Bay Area AQMD (San Francisco Bay Area Air Basin) 939 Ellis Street San Francisco, CA 94109
Butte County APCD (Sacramento Valley Air Basin) P.O. Box 1229 Oroville, CA 95965	Calaveras County APCD (Mountain Counties Air Basin) Government Center San Andreas, CA 95249
Colusa County APCD (Sacramento Valley Air Basin) P.O. Box 1029 Colusa, CA 95932	El Dorado County APCD (Lake Tahoe & Mountain Counties Air Basins) 360 Fair Lane Placerville, CA 95667
Fresno County APCD (San Joaquin Valley Air Basin) P.O. Box 11867 Fresno, CA 93775	Glenn County APCD (Sacramento Valley Air Basin) P.O. Box 351 Willows, CA 95988
Great Basin Unified APCD (Great Basin Valleys Air Basin) 157 Short Street, Suite 6 Bishop, CA 93514	Imperial County APCD (Southeast Desert Air Basin) 150 S. 9th Street El Centro, CA 92243-2801
Kern County APCD (San Joaquin Valley & Southeast Desert Air Basins) 1601 "H" Street, Suite 150 Bakersfield, CA 93301-5199	Kings County APCD (San Joaquin Valley Air Basin) 330 Campus Drive Hanford, CA 93230
Lake County AQMD (Lake County Air Basin) 833 Lakeport Blvd. Lakeport, CA 95453	Lassen County APCD (Northeast Plateau Air Basin) 175 Russell Avenue Susanville, CA 96130
Madera County APCD (San Joaquin Valley Air Basin) 135 West Yosemite Avenue Madera, CA 93637	Mariposa County APCD (Mountain Counties Air Basin) P.O. Box 5 Mariposa, CA 95338
Mendocino County APCD (North Coast Air Basin) Courthouse Ukiah, CA 95482	Merced County APCD (San Joaquin Valley Air Basin) Environmental Health P.O. Box 471 Merced, CA 95341
Modoc County APCD (Northeast Plateau Air Basin) 202 West 4th Street Alturas, CA 96101	Monterey Bay Unified APCD (North Central Coast Air Basin) 1164 Monroe Street, Suite 10 Salinas, CA 93906-3596
Mountain Counties Air Basin P.O. Box 5 Sierra City, CA 96125	North Coast Unified AQCD (North Coast Air Basin) 5630 South Broadway Eureka, CA 95501

Northern Sierra AQMD (Mountain Counties Air Basin) 10433 Willow Valley Road Nevada City, CA 95959	Northern Sonoma APCD (North Coast Air Basin) 109 North Street Healdsburg, CA 95448
Placer County APCD (Lake Tahoe, Mountain Counties, & Sacramento Valley Air Basins) 11484 B Avenue Auburn CA 95603	Sacramento County APCD (Sacramento Valley Air Basin) 9323 Tech Center Drive, Suite 800 Sacramento, CA 95826
San Bernardino APCD (Southeast Desert Air Basin) 15505 Civic Drive Victorville, CA 92392	San Diego County APCD (San Diego Air Basin) 9150 Chesapeake Drive San Diego, CA 92123-1095
San Joaquin County APCD (San Joaquin Valley Air Basin) P.O. Box 2009 Stockton, CA 95201	San Luis Obispo County APCD (South Central Coast Air Basin) 2156 Sierra Way, Suite B San Luis Obispo, CA 93401
Santa Barbara County APCD (South Central Coast Air Basin) 5540 Ekwil Street, Suite B Santa Barbara CA 93111	Shasta County AQMD (Northeast Plateau & Sacramento Valley Air Basins) 1855 Placer Street Redding, CA 96001
Siskiyou County APCD (Northeast Plateau Air Basin) 525 South Foothill Drive Yreka, CA 96097	South Coast AQMD (South Coast Air Basin) 9150 Flair Drive El Monte, CA 91731
Stanislaus County APCD (San Joaquin Valley Air Basin) 1716 Morgan Road Modesto, CA 95351	Sutter County APCD (Sacramento Valley Air Basin) 142 Garden Highway Yuba, City, CA 95991
Tehama County APCD (Sacramento Valley Air Basin) P.O. Box 38 Red Bluff, CA 96080	Tulare County APCD (San Joaquin Valley Air Basin) Health Building County Civic Center Visalia, CA 93291
Tuolumne County APCD (Mountain Counties Air Basin) 2 South Green Street Sonora, CA 95370	Ventura County APCD (South Central Coast Air Basin) 800 South Victoria Avenue Ventura, CA 93009
Yolo-Solano APCD (Sacramento Valley Air Basin) P.O. Box 1006 Woodland, CA 95695	Yuba County APCD (Sacramento Valley Air Basin) 938 14th Street Marysville, CA 95901

February 26, 1988

APCO Claude M. Finnell
Imperial County APCD
Southeast Desert Air Basin
150 S. 9th Street
El Centro, CA, 92243-2801

Dear Mr. Finnell:

The U.S. Army Department of Defense is required to increase the use of coal for steam generation. In order to comply with this requirement, the U.S. Army Construction Engineering Research Laboratory has contracted IGT to determine the feasibility of building new coal fired boilers and retrofitting existing gas/oil fired boilers to coal. For these two cases, we would like to obtain a copy of the emission regulations from your district. Please send the copies to:

Janet M. Gutraj
Institute of Gas Technology
4201 W. 36th Street
Chicago, IL 60632

Thank you for your cooperation.

Sincerely
Janet M. Gutraj
Chemical Engineer

Figure 1. Example of letter sent to California counties.

The first level of emission regulations to be evaluated is found in the Federal New Source Performance Standards (NSPS) for boilers as summarized in Table 2. The Federal Government initially set standards for fossil-fuel-fired steam generating units of more than 73 megawatts heat input rate (250 million Btu per hour) for which construction had commenced after August 17, 1971. New standards for industrial boilers larger than 100 million Btu heat input per hour have been added. The standards include nitrogen oxides (NO_x), sulfur dioxide (SO₂), and particulate emissions. According to the EPA, the emission standard required for a new boiler is determined at the time of the contract agreement between the supplier and customer.

Boilers must also comply with state regulations. Many states require that the boiler's emissions comply with Federal regulations only; some states define additional restrictions. As an example, California has more stringent regulations than the Federal Government. The South Coast Air Quality Management District was created by California state law as an agency responsible for managing the air quality in Los Angeles, Orange, and Riverside Counties and the nondesert portion of San Bernardino County.

Table 2. Federal standards of performance for boilers.

(from Environmental Protection Agency, Federal New Source Performance Standards)	
Fossil-Fuel-Fired Steam Generators greater than 250 MM Btu/h *	
SO ₂	1.2 lb/MM Btu
NO _x	0.70 lb/MM Btu solid fossil fuel, and/or wood
	0.60 lb/MM Btu lignite
	0.80 lb/MM Btu lignite from ND, SD, MT
Particulates	0.1 lb/MM Btu
Opacity	Not more than 20% opacity except for one six minute period per hour of not more than 27%
Fired Industrial Boilers greater than 100 MM Btu/h **	
SO ₂	1.2 lb/MM Btu, 90% reduction total sulfur
NO _x	0.60 lb/MM Btu
Particulates	0.05 lb/MM Btu coal
	0.10 lb/MM Btu wood
* Construction after August 17, 1971	
** Note: Emissions are per unit heat input.	

Rule 476 states:

A person shall not discharge into the atmosphere from any equipment having a maximum heat input rate of more than 12.5 million kilogram calories (50 million BTU) per hour used to produce steam, for which a permit to build, erect, install or expand is required after May 7, 1976, air contaminants that exceed the following:

- (1) Oxides of nitrogen, expressed as nitrogen dioxide (NO₂), calculated at three percent oxygen on a dry basis averaged over a minimum of 15 minutes - 125 ppm when using gas fuel and 225 ppm when using liquid or solid fuel.
- (2) Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state that exceeds both of the following two limits:
 - (A) 5 kilograms (11 pounds) per hour.

- (B) 23 milligrams per cubic meter (0.01 gr/SCF) calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes.

Rule 405 states:

A person shall not discharge into the atmosphere from any source, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 13. Where process weight is defined as the total weight of all materials introduced into any specific process which may discharge contaminants into the atmosphere. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and air will not.

Rule 431.3 states:

A person shall not burn any solid fossil fuel having a sulfur content which will emit more than 0.56 pounds of sulfur dioxide (SO₂) per million BTU. The provisions of this rule shall not apply to the use of a solid fossil fuel with higher sulfur content where process conditions or control equipment remove sulfur compounds from stack gases to the extent that the emission of sulfur compounds into the atmosphere is no greater than that which could be emitted by using a fuel which complies with provisions of this rule.

At a minimum the above rules are to be followed. The District will deny permits to construct unless the Best Available Control Technology (BACT) is employed for each non-attainment air contaminant. BACT means the most stringent emission change limitation or control technique which:

- (1) Has been achieved in practice for such a permit unit category or class of source; or
- (2) Is contained in any State Implementation Plan (SIP) approved by the Environmental Protection Agency (EPA) for such a permit unit category or class of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed source demonstrates to the satisfaction of the Executive Officer that such limitation or control technique is not presently achievable; or
- (3) Is any other emission control technique found by the Executive Officer to be technologically feasible and cost-effective for such class or category of sources or for a specific source. No emissions limitation or control technique, the application of which would result in emissions

from a new or modified source in excess of the amount allowable under the New Source Performance Standards or promulgated by the EPA pursuant to Section 111 of the Clean Air Act, may be considered BACT.

The complexities of some of the regulations, particularly those regarding Best Available Control Technology, cannot be adequately defined so that they may be included in the program. As a result, the program will only use the quantitative information gathered from the regulations.

Additionally, after a review of the regulations, the three emission types that are included in the program are: Particulates, NO_x , and SO_x (also considered as SO_2 in the program). Although opacity is included in the Federal regulations, most states do not consider it and there is no defined method of calculating the opacity based on boiler technology and coal properties.

3 Information Review

Figure 2 presents the standard display of coal-fired boiler emission regulations. All the information used by the CHPECON program is shown on the screen, which is divided into two sections. The area within the box is emission information; the area below the box is for the menu prompts. Information is accessed and updated through this menu. To select an option, enter the capitalized letter in the option description.

The options on the main menu are:

Edit item <E> -- allows editing or adding emission regulation information, based on an item to be edited, as indicated by the item number on the left side of the screen. This option is described more fully below.

Forward <F> -- moves through the information file to display the next type of emission standards for a given state or region; or if there are none, moves to the next region for the state; or if there are none, moves to the next state. Movement through the file stops when you reach the end of the information.

Delete item <D> -- Allows you to delete a particular item in the list displayed

Emission Regulation Update					
State: KY - Kentucky					
Region: 6 County Class IVA					
Emission type: S - SOx (sulfur oxides)					
Itm	Grp	Coal	Last Chg	Low	High
1			09/01/88	0.00	10.00
2			09/01/88	10.00	250.00
3			09/01/88	250.00	1500.00
4			09/01/88	1500.00	21000.00
5			09/01/88	21000.00	99999.00
Value					
8 * input (lb/hr)					
10.8875 * input -0.1338 (lb/hr)					
5.2 * input (lb/hr)					
3.5 * input (lb/hr)					
3.1 * input (lb/hr)					
Edit item / Delete item / Forward / Backward / goto State / emission Type Region edit / Print item list / Quit Option (E/D/F/B/S/T/R/P/Q) « »					

Figure 2. Display of coal-fired boiler emission regulations.

on the page. Once the deletion is confirmed, the remaining values are redisplayed with new item numbers.

**Backward ** -- is the opposite of moving forward. This moves to the logically previous set of emission standards (either for emission type, region, or state). Movement stops when you reach the beginning of the information.

goto State <S> -- Upon choosing State, the cursor appears at the current screen's state. To change the state, insert the two letter state abbreviation. Because some states are further divided into regions that might have stand-alone or more stringent rules, the program prompts you to enter the appropriate region. Choose "0" to determine the emissions as they apply to the entire state or enter "?" to display the list of regions. In the case of California, there are no state laws; if you select the entire state, there will be no regulations. Some states have regional regulations and state regulations. If you are trying to determine the emission regulations for an area within the state, check both the entire state and region. If the list is long, the "?" in the menu prompt changes to "M", indicating more pages. Press M to list the rest of the regions and to go back to the beginning of the list. Enter a region number or 0 for the entire state to return to the main menu.

emission Type <T> -- Upon choosing emission Type, enter the type of emissions to review. The choices are *P* (Particulates), *N* (NO_x) or *S* (SO_x). The screen will display the emission regulations for that pollutant for the presently displayed state or region. The information includes the coal type, low and high range of the boiler size (MBtu/hr) and the equation for the limit of the pollutant for that regulation.

Region edit <R> -- This option switches the display to that shown in Figure 3, allowing you to add or delete regions or edit the descriptions for the currently selected state. To edit another state's region list, you must first select the state. The options presented work in the same manner as those on the main menu.

Edit permits selecting one region by highlighting, then editing the description shown.

Add creates a blank entry, and requests a region number, then allows entry of the description.

Delete permits deleting a region by highlighting it. You are asked to confirm the deletion. If yes, the program displays the number of emission regulation entries that would also be deleted with the region, then asks you to confirm the deletion again.

Region	Description
1	Mariposa County APCD
2	Tuolumne County APCD
3	Northern Sierra AQMD
4	Tulare County APCD
5	North Coast Air Basin
6	Madera County APCD
7	Kern County APCD - Valley Basin
8	Kern County APCD - Desert Basin
9	County of Siskiyou APCD
10	Modoc County APCD
11	Imperial County APCD
12	Placer County APCD
13	Sutter County APCD
14	Shasta County AQMD
15	Tehama County APCD
16	Calaveras County APCD
17	Colusa County APCD
18	Great Basin Unified Unified APCD

Edit / Add / Delete / Forward / Backward / Print / Quit
Option (E/A/D/F/B/P/Q) « »

Figure 3. Example of region edit screen.

Forward and **Backward** moves the display through the region list by screens, if there are more regions than can be displayed on one screen.

Print displays another menu, as shown in Figure 4, and allows printing a list of the regions either for the current state (that which is displayed), or for all states. An example of the region printout is shown in Figure 5.

Quit returns you back to the main menu.

Region	Description
1	Mariposa County APCD
2	Tuolumne County APCD
3	Northern Sierra AQMD
4	Tulare County APCD
5	North Coast Air Basin
6	Madera County APCD
7	Kern County APCD - Valley Basin
8	Kern County APCD - Desert Basin
9	County of Siskiyou APCD
10	Modoc County APCD
11	Imperial County APCD
12	Placer County APCD
13	Sutter County APCD
14	Shasta County AQMD
15	Tehama County APCD
16	Calaveras County APCD
17	Colusa County APCD
18	Great Basin Unified Unified APCD

print regions for current State, regions for All states, or Quit
Option (S/A/Q) « »

Figure 4. Example of region print screen.

Region Listing for: CA - California		Page 1
	Region Description	
1	Mariposa County APCD	
2	Tuolumne County APCD	
3	Northern Sierra AQMD	
4	Tulare County APCD	
5	North Coast Air Basin	
6	Madera County APCD	
7	Kern County APCD - Valley Basin	
8	Kern County APCD - Desert Basin	
9	County of Siskiyou APCD	
10	Modoc County APCD	
11	Imperial County APCD	
12	Placer County APCD	
13	Sutter County APCD	
14	Shasta County AQMD	
15	Tehama County APCD	
16	Calaveras County APCD	
17	Colusa County APCD	
18	Great Basin Unified Unified APCD	
19	Yolo-Solano APCD	
20	Yuba County APCD	
21	San Bernardino APCD	
22	Lassen County APCD	
23	North Coast Unified AQMD	
24	Sacramento County APCD	
25	King County APCD	
26	Butte County APCD	
27	Ventura County APCD	
28	South Coast AQMD	
29	Northern Sonoma County APCD	
30	Mendocino County APCD	
31	San Luis Obispo County APCD	
32	San Joaquin County APCD	
33	Merced County APCD	
34	Monterey Bay Unified APCD	
35	Bay Area AQMD	
36	Glenn County APCD	
37	Stanislaus County APCD	
38	El Dorado County APCD	
39	El Dorado County APCD - Lake Tahoe Air Basin	

Figure 5. Example of region printout.

Print item list <P> -- Allows you to print lists of emission regulations. When this option is selected, you are presented with another menu asking whether to print items that are Displayed, items for one State, All items, or Quit. This is shown in Figure 6. Select the print option by pressing the appropriate capital letter. Quitting returns you to the main menu. The option to print items that are Displayed prints only those items on the screen currently—one state, one region, one emission type. Printing items for one State prints a list for all regions and for all emission types. Printing All prints a continuous list from beginning to end of the emission regulation data. An example of the printout is in Figure 7.

Quit <Q> -- this option returns to the level at which you started EMISSION. If you used EMISSION as a stand-alone program, the system retruns to the dot prompt of dBASE (or one of the clones), the DOS prompt if running the compiled version, or the main menu of CHPECON if run as part of the overall program.

Emission Regulation Update						
State: CO - Colorado						
Region: 0						
Emission type: P - Particulates						
Itm	Grp	Coal	Last Chg	Low	High	Value
1			09/01/88	0.00	1.00	0.5 * input (lb/hr)
2			09/01/88	1.00	500.00	0.5 * input -0.26 (lb/hr)
3			09/01/88	250.00	99999.00	0.03 * input (lb/hr)
4			09/01/88	500.00	99999.00	0.1 * input (lb/hr)

Print items that are Displayed, items for one State, All items, or
Quit (cancel print) -- Option (D / S / A / Q) « »

Figure 6. Example of emission print screen.

EPA Emission Regulation Information Printout Page 1

State: KY -- Kentucky Emission type: SOx
 Region: 6 -- County Class IVA
 Applicability input range: 0.00 MBtu/hr to 10.00 MBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 8 * input [10⁶ Btu/hr]

State: KY -- Kentucky Emission type: SOx
 Region: 6 -- County Class IVA
 Applicability input range: 10.00 MBtu/hr to 250.00 MBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 10.8875 * input -0.1338 [10⁶ Btu/hr]

State: KY -- Kentucky Emission type: SOx
 Region: 6 -- County Class IVA
 Applicability input range: 250.00 MBtu/hr to 1500.00 MBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 5.2 * input [10⁶ Btu/hr]

State: KY -- Kentucky Emission type: SOx
 Region: 6 -- County Class IVA
 Applicability input range: 1500.00 MBtu/hr to 21000.00 MBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 3.5 * input [10⁶ Btu/hr]

State: KY -- Kentucky Emission type: SOx
 Region: 6 -- County Class IVA
 Applicability input range: 21000.00 MBtu/hr to 99999.00 MBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 3.1 * input [10⁶ Btu/hr]

Figure 7. Example of printed list of emission regulations.

4 Information Editing

The displayed emission data can be edited by choosing "Edit standard - <E>" on the main menu. Upon choosing this option, input the item number to edit or [+] to add a new item. Figure 8 shows the edit screen. The program asks you to input the low and high range of applicability of the particular emission regulation. Many regulations have different allowable levels of emissions based on the size of the plant, with the range defining the size.

The group identifier is used when multiple equations apply to a range. This type of definition is prevalent in SO_x regulations. For example, the group identifier is usually used to indicate that both the values of 1.2 lb/MMBtu/hr and 90 percent reduction are applied to a particular boiler. When multiple definitions occur, the same group letter would be used to identify the link between the definitions. If only one equation applies to a range, a group identifier is not used.

Coal type refers to the type of coal with which the regulation is concerned. Usually this entry is left blank, indicating that it is applicable to all coals. However, if a differentiation is made, the coal types have to be entered as separate values. For example, if anthracite has one value and all others have another, then entries have to

```

Input range of application - Low: 10.00 High: 250.00 Last change
in MMBtu/hr (enter 0 & 99999.99 for lower and upper limits) 09/01/88

Group identifier:
(to be used when more than one item is applicable for a given range)

Coal type covered:
[A] - anthracite [L] - lignite [ ] - all
[B] - bituminous [S] - sub-bituminous

Line type for emissions: 3 Value
1 - constant (lb/MMBtu) V1: 10.8875
2 - line (lb/MMBtu) V2: -0.1338
3 - power (lb/MMBtu)
4 - wt % coal
5 - % reduction
6 - ppm exhaust Function:
7 - % exhaust emis= {V1} * input ^ {V2}
8 - grains / SCF
9 - lb/million Btu
10 - lb/hr
Accept and save / Change values / Quit without saving
option:

```

Figure 8. Example of emission edit screen.

be made with anthracite having one value, and bituminous, subbituminous, and lignite having the other value. Using this example, "anthracite and all" can be used if the anthracite value is lower than the "all" value, since the program searches out the strictest applicable regulations to meet. The program will find the "all" value and the anthracite value and pick the anthracite for checking. On the other hand, if the anthracite value is higher than the "all" value, items must be defined for each coal type, because the program will incorrectly use the lower "all" value.

The equation type for emissions, and emission limit factors are the next values the program asks for. The number of limit factor values requested is determined by the equation type. Ten equation forms were developed based on the different representations used by the regulating agencies. An example of each of these is shown in Figure 9. Table 3 explains each equation type in detail.

After this, you can "Accept and save" the displayed values, "Change" the values (re-enter), or "Quit without saving" the entered values (return to the main menu without changing the information file).

Equation Type 1	State: AL -- Alabama	Emission type: particulates
	Applicability input range: 1.00 MBtu/hr to 10.00 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions [lb/hr] = 0.5 * input [10 ⁶ Btu/hr]	
=====		
Equation Type 2	State: NY -- New York	Emission type: particulates
	Applicability input range: 10.00 MBtu/hr to 250.00 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions [lb/hr] = 0.6 @ low -- 0.31 @ high	
=====		
Equation Type 3	State: IL -- Illinois	Emission type: particulates
	Applicability input range: 10.00 MBtu/hr to 500.00 MBtu/hr	
	Group ID: A Type of coal: -- all --	
	emissions [lb/hr] = 1.2 * input - 0.23 [10 ⁶ Btu/hr]	
=====		
Equation Type 4	State: CT -- Connecticut	Emission type: SOx
	Applicability input range: 0.00 MBtu/hr to 99999.00 MBtu/hr	
	Group ID: A Type of coal: -- all --	
	allowed input = 1 % wt coal	
=====		
Equation Type 5	State: CO -- Colorado	Emission type: NOx
	Applicability input range: 250.00 MBtu/hr to 99999.00 MBtu/hr	
	Group ID: A Type of coal: -- all --	
	reduction = 65 %	
=====		
Equation Type 6	State: AK -- Alaska	Emission type: SOx
	Applicability input range: 0.00 MBtu/hr to 99999.99 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions = 500 ppm in exhaust	
=====		
Equation Type 7	State: MI -- Michigan	Emission type: particulates
	Applicability input range: 0.00 MBtu/hr to 99999.99 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions = 0.01 % in exhaust	
=====		
Equation Type 8	State: AK -- Alaska	Emission type: particulates
	Applicability input range: 0.00 MBtu/hr to 99999.99 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions = 0.1 grains / SCF exhaust	
=====		
Equation Type 9	State: WI -- Wisconsin	Emission type: SOx
	Applicability input range: 0.00 MBtu/hr to 99999.99 MBtu/hr	
	Group ID: Type of coal: -- all --	
	emissions = 1.1 lb/million Btu input	
=====		
Equation Type 10	State: CA -- California	Emission type: particulates
	Applicability input range: 0.00 MBtu/hr to 99999.99 MBtu/hr	
	Group ID: A Type of coal: -- all --	
	emissions = 10 lb/hr	

Figure 9. Example of equation types used to specify emission standards calculations.

Table 3. Description of equation types used by EMISSION.

Equation Type	Description of Equation
1	This type expresses the maximum allowable emissions (lb/hr) by multiplying a state regulation constant factor times the MMBtu/hr heat input. In the case of Alabama the 0.5 factor is to be multiplied by the heat input in MMBtu/hr.
2	This type gives the maximum allowable emissions (lb/hr) for a high and low heat input. For cases in between, a line of MMBtu/hr heat input vs. allowable emissions (lb/hr) should be used to determine the allowable emissions.
3	This type is expressed as a constant times the heat input (MMBtu/hr) raised to a power. For example, for Illinois, 1.2 is to be multiplied by the heat input in MMBtu/hr raised to -0.23.
4	This type limits the weight percent of sulfur in the coal feed.
5	This type is the percent reduction input vs. output required of the pollutant.
6	This type expresses the allowable output in PPM.
7	This type expresses the allowable output in volume percent exhaust.
8	This type expresses the allowable output in grains/SCF exhaust.
9	This type limits the input of a pollutant material to a specified maximum value per MMBtu input.
10	This type expresses the allowable output in lb/hr.

5 Program and Data Listing

The listing of the program segments is contained in Appendix A of this report. A listing of the information stored in the emission regulation data base is contained in Appendix B of this report. A list of the regions that have been defined for the states that have regions is in Appendix C.

The file structure of EPADATA.DBF is shown in Table 4. The individual data base fields are updated through the information screen, as described above. The file structure of EPAREGN.DBF is shown in Table 5. The fields are updated when a particular state option is selected. A region's definition is not automatically deleted if all the regulations are deleted for a particular region. This must be done manually. However, printing will not show any blanks for the region since it only prints based on the presence of entries.

Table 4. Structure for data base file EPADATA.DBF

Field	Field Name	Field Type	Field Width	Decimal Width
1	STATE	Character	2	
2	REGION	Numeric	2	
3	LAST CHG	Date	8	
4	EMISSION	Character	1	
5	GRP	Character	1	
6	COAL TYPE	Character	1	
7	LOW END	Numeric	8	2
8	HI END	Numeric	8	2
9	LNTYP	Numeric	2	
10	V1	Numeric	9	4
11	V2	Numeric	9	4
12	V3	Numeric	9	4
13	V4	Numeric	9	4

Table 5. Structure for data base file EPAREGN.DBF.

Field	Field Name	FieldType	Field Width	Decimal Width
1	STATE	Character	2	
2	REGION	Numeric	2	
3	DESC	Character	63	

Metric Conversion Table

1 in.	=	25.4 mm
1 sq in.	=	6.452 cm ²
1 psi	=	6.89 kPa
1 psi	=	89.300 g/cm ²
1 lb	=	0.453 kg
1 lb/hr	=	0.126 g/s
1 cu ft	=	0.028 m ³
1 sq ft	=	0.093 m ²
°F	=	(°C + 17.78) × 1.8
1 Btu/lb	=	0.556 cal/g
1 ton	=	907.185 kg

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Appendix A: Program Listing

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 16:07:03

Pg 1
of 6
1-50

```
*****
*- CHKSTAT2.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry, detailed analysis
*****
*
* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stln=LEN(st)
stlst=""
stn=""
ok=.f.

* if entry is two characters,
* check to see if it is proper state abbreviation
+--IF stln=2
|   DO idstate
+--ENDIF

* if state found, stlst has name, routine can return from here
+--IF LEN(stlst)>0
|   stn=st
|   ok=.t.
|   RETURN
+--ENDIF

* if length is 0 (no entry), set name to special code
+--IF stln=0
|   stlst="--,--"
|   ok=.t.
+--ENDIF

* if nothing has been found, try matching
* first letters of entry with state names
+--DO WHILE .NOT. ok
|
|   +--IF 'ALABAMA'=st
|   |   stlst=stlst+', Alabama'
|   |   stn='AL'
|   +--ENDIF
|   +--IF 'ALASKA'=st
|   |   stlst=stlst+', Alaska'
|   |   stn='AK'
|   +--ENDIF
|   +--IF 'ARKANSAS'=st
|   |   stlst=stlst+', Arkansas'
```

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 16:07:03

Pg 2
of 6
51-100

```
|      stn='AR'  
|  +---ENDIF  
|  +---IF 'ARIZONA'=st  
|      stlst=stlst+', Arizona'  
|      stn='AZ'  
|  +---ENDIF  
|  +---IF 'CALIFORNIA'=st  
|      stlst=stlst+', California'  
|      stn='CA'  
|  +---ENDIF  
|  +---IF 'COLORADO'=st  
|      stlst=stlst+', Colorado'  
|      stn='CO'  
|  +---ENDIF  
|  +---IF 'CONNECTICUT'=st  
|      stlst=stlst+', Connecticut'  
|      stn='CT'  
|  +---ENDIF  
|  +---IF 'DELAWARE'=st  
|      stlst=stlst+', Delaware'  
|      stn='DE'  
|  +---ENDIF  
|  +---IF 'DISTRICT OF COLUMBIA'=st  
|      stlst=stlst+', District of Columbia'  
|      stn='DC'  
|  +---ENDIF  
|  +---IF 'FLORIDA'=st  
|      stlst=stlst+', Florida'  
|      stn='FL'  
|  +---ENDIF  
|  +---IF 'GEORGIA'=st  
|      stlst=stlst+', Georgia'  
|      stn='GA'  
|  +---ENDIF  
|  +---IF 'HAWAII'=st  
|      stlst=stlst+', Hawaii'  
|      stn='HI'  
|  +---ENDIF  
|  +---IF 'IDAHO'=st  
|      stlst=stlst+', Idaho'  
|      stn='ID'  
|  +---ENDIF  
|  +---IF 'ILLINOIS'=st  
|      stlst=stlst+', Illinois'  
|      stn='IL'  
|  +---ENDIF  
|  +---IF 'INDIANA'=st  
|      stlst=stlst+', Indiana'  
|      stn='IN'  
|  +---ENDIF
```

```
|  +--IF 'IOWA'=st
|  |      stlst=stlst+', Iowa'
|  |      stn='IA'
|  +--ENDIF
|  +--IF 'KANSAS'=st
|  |      stlst=stlst+', Kansas'
|  |      stn='KS'
|  +--ENDIF
|  +--IF 'KENTUCKY'=st
|  |      stlst=stlst+', Kentucky'
|  |      stn='KY'
|  +--ENDIF
|  +--IF 'LOUISIANA'=st
|  |      stlst=stlst+', Louisiana'
|  |      stn='LA'
|  +--ENDIF
|  +--IF 'MAINE'=st
|  |      stlst=stlst+', Maine'
|  |      stn='ME'
|  +--ENDIF
|  +--IF 'MARYLAND'=st
|  |      stlst=stlst+', Maryland'
|  |      stn='MD'
|  +--ENDIF
|  +--IF 'MASSACHUSETTS'=st
|  |      stlst=stlst+', Massachusetts'
|  |      stn='MA'
|  +--ENDIF
|  +--IF 'MICHIGAN'=st
|  |      stlst=stlst+', Michigan'
|  |      stn='MI'
|  +--ENDIF
|  +--IF 'MINNESOTA'=st
|  |      stlst=stlst+', Minnesota'
|  |      stn='MN'
|  +--ENDIF
|  +--IF 'MISSISSIPPI'=st
|  |      stlst=stlst+', Mississippi'
|  |      stn='MS'
|  +--ENDIF
|  +--IF 'MISSOURI'=st
|  |      stlst=stlst+', Missouri'
|  |      stn='MO'
|  +--ENDIF
|  +--IF 'MONTANA'=st
|  |      stlst=stlst+', Montana'
|  |      stn='MT'
|  +--ENDIF
|  +--IF 'NEBRASKA'=st
|  |      stlst=stlst+', Nebraska'
```

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```
|      stn='NE'  
|  +---ENDIF  
|  +---IF 'NEVADA'=st  
|      stlst=stlst+', Nevada'  
|      stn='NV'  
|  +---ENDIF  
|  +---IF 'NEW HAMPSHIRE'=st  
|      stlst=stlst+', New Hampshire'  
|      stn='NH'  
|  +---ENDIF  
|  +---IF 'NEW JERSEY'=st  
|      stlst=stlst+', New Jersey'  
|      stn='NJ'  
|  +---ENDIF  
|  +---IF 'NEW MEXICO'=st  
|      stlst=stlst+', New Mexico'  
|      stn='NM'  
|  +---ENDIF  
|  +---IF 'NEW YORK'=st  
|      stlst=stlst+', New York'  
|      stn='NY'  
|  +---ENDIF  
|  +---IF 'NORTH CAROLINA'=st  
|      stlst=stlst+', North Carolina'  
|      stn='NC'  
|  +---ENDIF  
|  +---IF 'NORTH DAKOTA'=st  
|      stlst=stlst+', North Dakota'  
|      stn='ND'  
|  +---ENDIF  
|  +---IF 'OHIO'=st  
|      stlst=stlst+', Ohio'  
|      stn='OH'  
|  +---ENDIF  
|  +---IF 'OKLAHOMA'=st  
|      stlst=stlst+', Oklahoma'  
|      stn='OK'  
|  +---ENDIF  
|  +---IF 'OREGON'=st  
|      stlst=stlst+', Oregon'  
|      stn='OR'  
|  +---ENDIF  
|  +---IF 'PENNSYLVANIA'=st  
|      stlst=stlst+', Pennsylvania'  
|      stn='PA'  
|  +---ENDIF  
|  +---IF 'RHODE ISLAND'=st  
|      stlst=stlst+', Rhode Island'  
|      stn='RI'  
|  +---ENDIF
```

```
|  +---IF 'SOUTH CAROLINA'=st
|  |      stlst=stlst+', South Carolina'
|  |      stn='SC'
|  +---ENDIF
|  +---IF 'SOUTH DAKOTA'=st
|  |      stlst=stlst+', South Dakota'
|  |      stn='SD'
|  +---ENDIF
|  +---IF 'TEXAS'=st
|  |      stlst=stlst+', Texas'
|  |      stn='TX'
|  +---ENDIF
|  +---IF 'TENNESSEE'=st
|  |      stlst=stlst+', Tennessee'
|  |      stn='TN'
|  +---ENDIF
|  +---IF 'UNITED STATES'=st
|  |      stlst=stlst+', United States'
|  |      stn='US'
|  +---ENDIF
|  +---IF 'UTAH'=st
|  |      stlst=stlst+', Utah'
|  |      stn='UT'
|  +---ENDIF
|  +---IF 'VERMONT'=st
|  |      stlst=stlst+', Vermont'
|  |      stn='VT'
|  +---ENDIF
|  +---IF 'VIRGINIA'=st
|  |      stlst=stlst+', Virginia'
|  |      stn='VA'
|  +---ENDIF
|  +---IF 'WASHINGTON'=st
|  |      stlst=stlst+', Washington'
|  |      stn='WA'
|  +---ENDIF
|  +---IF 'WEST VIRGINIA'=st
|  |      stlst=stlst+', West Virginia'
|  |      stn='WV'
|  +---ENDIF
|  +---IF 'WISCONSIN'=st
|  |      stlst=stlst+', Wisconsin'
|  |      stn='WI'
|  +---ENDIF
|  +---IF 'WYOMING'=st
|  |      stlst=stlst+', Wyoming'
|  |      stn='WY'
|  +---ENDIF
```

* if stlst is empty, take off last character of entry to see if it matches

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```
|  +--IF LEN(stlst)=0
|  |      st=SUBSTR(st,1,LEN(st)-1)
|  |      stln=LEN(st)
|  |
|  * if all entry characters removed, set special code, and exit do-while
|  |  +--IF stln=0
|  |  |      ok=.t.
|  |  |      stlst="--,--"
|  |  +--ENDIF
|  |
|  * if stlst has possible names, set ok to true (for ok to leave do-while)
|  +--ELSE
|  |      ok=.t.
|  +--ENDIF
|
|  * end of search for possible matches with state names
+--ENDDO

    * strip off first two characters to eliminate leading ', '
    stlst=SUBSTR(stlst,3)
    st=stn

RETURN
```

```
*****
*- CHKSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry
*****
*
stn=""
DO chkstat2

* if ',' is found in list, more than one state name is present
* need to print additional help message
+--IF AT(",", stlst)>0
|   st=""
|   ok=.f.
|   @ 23,1 CLEAR TO 24,78
|
|   * if special code found, then say that no match found
|   +--IF stlst=","--
|   |   @ 23,2 SAY "No match found for the name"
|   |   @ 24,2 SAY "Please check your spelling"
|   |
|   * if regular names are present, display them as possible matches
|   +--ELSE
|   |   @ 23,2 SAY "Enter the name more completely. Possible matches are:"
|   |   @ 24,2 SAY SUBSTR(stlst,1,76)
|   |
|   +--ENDIF
|
|   * stlst contains only one state name, so it must be a match
+--ELSE
|   * set st to value found when matching entry
|   st=stn
+--ENDIF

* return to called routine
RETURN
```

01-11-89 15:00:00 DBENVRN.PRG
Wed 01-11-89 16:06:18

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of 1
1-40

```
*****
* DBENVRN.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
*****
* define database environment for the system
*****
*
PUBLIC fox, clipper, ending

* define ending of index files based on operating environment
ending=""

* fox is .t. if run under FoxBASE+, otherwise .f.
+--IF fox
|   ending=".IDX"
+--ENDIF

* clipper is .t. if run under Clipper, otherwise .f.
+--IF clipper
|
|   * function returns index file ending based on how program has been linked.
|   * returns ".NDX" if ndx.obj was linked to produce dBASE III+
|   *   compatible index files
|   * returns ".NTX" if ndx.obj not linked, which results in standard
|   *   Clipper index files
|   ending=indexext()
|
|   * readexit function with .t. as parameter sets Clipper to use
|   * up-arrow and down-arrow keys to exit from variable READs
|   c=readexit(.t.)
+--ENDIF

* if nothing was assigned by other two routines, it must be running
* under dBASE III+, meaning ".NDX" (standard index). files used
+--IF LEN(ending)=0
|   ending=".NDX"
+--ENDIF

RETURN
```

A-13

01-11-89 15:00:00 EMISSION.PRG
Wed 01-11-89 16:32:28

Pg 2
of 2
51-88

```
|      CLOSE DATABASES
|      @ ROW(),COL() SAY " - done"
|
|      @ ROW()+1,10 SAY "Indexing emission region file"
|      USE eparegn
|      SET SAFETY OFF
|      INDEX ON state +STR(region,2) TO eparegn
|      SET SAFETY ON
|      CLOSE DATABASES
|      @ ROW(),COL() SAY " - done"
|
|      +--IF .NOT. clipper
|      |      ON ESCAPE
|      +--ENDIF
|
+--ENDIF

      * clear key entries made while user was waiting
      c=1
+--DO WHILE c<>0
|      c=INKEY()
+--ENDDO

      @ 24,20 SAY "Press any key to continue..."

      * wait for any key press after message displayed
      c=0
+--DO WHILE c=0
|      c=INKEY()
+--ENDDO

      * run main emission (epa) routine
      DO epa0

      CLEAR ALL
      CLEAR
      SET TALK ON
      RETURN
```

```
*****
*- EPA0.PRG -- Last Update 01/11/88
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- main epa emissions database routine
*****
*
CLEAR
optr="-"
SET DELETED ON
SELECT 1
USE epadata INDEX epadata
SELECT 2
USE eparegn INDEX eparegn
SELECT 1
+-- IF RECCOUNT(>)>0
|   mst=state
|   mreg=region
|   emis_type=emission
|   +-- IF mreg>0
|   |   SELECT 2
|   |   SEEK mst +STR(mreg,2)
|   |   +-- IF .NOT. EOF()
|   |   |   reg_desc=desc
|   |   +-- ELSE
|   |   |   reg_desc="unknown"
|   |   +-- ENDF
|   |   SELECT 1
|   +-- ELSE
|   |   reg_desc=" "
|   +-- ENDF
+-- ELSE
|   mst="*"
|   mreg=0
|   emis_type="P"
|   reg_desc=" "
+-- ENDF

* -- loop through all options possible
+-- DO WHILE optr<>"Q"
|
|   * -- display information
|   CLEAR
|   @ 1,0 TO 8,79 DOUBLE
|   @ 6,1 TO 6,78
|   @ 3,1 TO 3,78
|   @ 22,0 TO 22,79
|   @ 2,3 SAY "Emission Regulation Update"
```

```

|      @ 4,4 SAY "State:"
|      st=mst
|      stlst=" "
|      DO idstate
|      @ 4,11 SAY mst + ' - ' + stlst
|      @ 5,3 SAY "Region:"
|      @ 5,11 SAY mreg PICTURE "##"
|      SELECT 2
|      SEEK mst+STR(mreg,2)
|      @ 5,14 SAY desc
|      SELECT 1
|      @ 7,3 SAY "Emission type:"
|      @ 7, 18 SAY emis_type
|      +---DO CASE
|      |      CASE emis_type='P'
|      |      |      @ 7,20 SAY '- Particulates'
|      |      CASE emis_type='N'
|      |      |      @ 7,20 SAY '- NOx (nitrous oxides)'
|      |      CASE emis_type='S'
|      |      |      @ 7,20 SAY '- SOx (sulfur oxides)'
|      +---ENDCASE
|      @ 9,0 SAY "Itm Grp Coal Last Chg      Low      High";
|      + "      Value"
|
| * display possible standards for editing
|      SELECT 1
|      SEEK mst +STR(mreg,2) +emis_type
|      +---IF EOF()
|      |      SEEK mst +STR(mreg,2)
|      |      +---IF EOF()
|      |      |      SEEK mst
|      |      |      +---IF EOF()
|      |      |      |      c=SUBSTR(mst,1,1)
|      |      |      |      +---DO WHILE .NOT. EOF() .AND. c>"A"
|      |      |      |      |      SEEK c
|      |      |      |      |      +---IF EOF()
|      |      |      |      |      |      c=CHR(ASC(c)-1)
|      |      |      |      |      +---ENDIF
|      |      |      |      +---ENDDO
|      |      |      +---IF EOF()
|      |      |      |      GO top
|      |      |      +---ENDIF
|      |      +---ENDIF
|      +---ENDIF
|      +---ENDIF
|      i=0
|      +---DO WHILE i<12 .AND. state=mst .AND. region=mreg .AND. ;
|      |      emis_type=emission .AND. .NOT. EOF()
|      |      @ i+10,1 SAY i+1 PICTURE "##"
|      |      @ i+10,5 SAY grp

```

```
|      |      @ i+10,10 SAY coal_type
|      |      @ i+10,13 SAY last_chg
|      |      @ i+10,22 SAY low_end
|      |      @ i+10,32 SAY hi_end
|      |
|      | * convert to string for emission value
|      |   cv1=LTRIM(STR(v1,12,5))
|      |   +--DO WHILE SUBSTR(cv1,LEN(cv1),1)='0'
|      |   |       cv1=SUBSTR(cv1,1,LEN(cv1)-1)
|      |   +--ENDDO
|      |   +--IF SUBSTR(cv1,LEN(cv1),1)='.'
|      |   |       cv1=SUBSTR(cv1,1,LEN(cv1)-1)
|      |   +--ENDIF
|      |   cv2=LTRIM(STR(v2,12,5))
|      |   +--DO WHILE SUBSTR(cv2,LEN(cv2),1)='0'
|      |   |       cv2=SUBSTR(cv2,1,LEN(cv2)-1)
|      |   +--ENDDO
|      |   +--IF SUBSTR(cv2,LEN(cv2),1)=' '
|      |   |       cv2=SUBSTR(cv2,1,LEN(cv2)-1)
|      |   +--ENDIF
|      |   emvl=' '
|      |   +--DO CASE
|      |   |       CASE Intyp=1
|      |   |       |       emvl=cv1+' * input (lb/hr)'
|      |   |       CASE Intyp=2
|      |   |       |       emvl=cv1+' - '+cv2+' (lb/hr) for low - hi'
|      |   |       CASE Intyp=3
|      |   |       |       emvl=cv1+' * input ^ '+cv2+' (lb/hr)'
|      |   |       CASE Intyp=4
|      |   |       |       emvl=cv1+' % wt coal'
|      |   |       CASE Intyp=5
|      |   |       |       emvl=cv1+' % reduction'
|      |   |       CASE Intyp=6
|      |   |       |       emvl=cv1+' ppm in exhaust'
|      |   |       CASE Intyp=7
|      |   |       |       emvl=cv1+' % in exhaust'
|      |   |       CASE Intyp=8
|      |   |       |       emvl=cv1+' grains / SCF exhaust'
|      |   |       CASE Intyp=9
|      |   |       |       emvl=cv1+' lb/million Btu input'
|      |   |       CASE Intyp=10
|      |   |       |       emvl=cv1+' lb/hr exhaust'
|      |   +--ENDCASE
|      |   @ i+10,42 SAY emvl
|      |
|      |   i=i+1
|      |   SKIP
|      | +--ENDDO
|
| * -- get new optr to be able to act
```



```
|      @ 23,0 CLEAR
|      @ 23,3 SAY "Edit item / Delete item / Forward / Backward /" ;
|      +" goto State / emission Type"
|      @ 24,3 SAY "Region edit / Print item list / Quit"
|      @ 24,43 SAY "Option (E/D/F/B/S/T/R/P/Q) " +CHR(174) +" " +CHR(175)
|      optr=" "
|      +---DO WHILE AT(optr,"EDFBSTRPQ")=0
|      |      optr=" "
|      |      @ 24,72 GET optr PICTURE "!"
|      |      READ
|      +---ENDDO
|
|      * -- loop through possible actions
|      +---DO CASE
|      |
|      |      * -- option for changing state and/or region
|      |      |      CASE optr="S"
|      |      |      |      DO epast
|      |      |
|      |      * -- option for editing region information
|      |      |      CASE optr="R"
|      |      |      |      preg=mreg
|      |      |      |      DO epargn
|      |      |      |      SELECT 1
|      |      |      |      mreg=preg
|      |
|      |      * -- option for looking up new emission type
|      |      |      CASE optr="T"
|      |      |      |      @ 23,1 CLEAR
|      |      |      |      @ 23,2 SAY 'Enter type of emissions to review: '
|      |      |      |      @ 24,2 SAY 'P - particulates      N - NOx (nitrous oxides)      ';
|      |      |      |      +'S - SOx (sulfur oxides)';
|      |      |      |      ok=.f.
|      |      |      +---DO WHILE .NOT. ok
|      |      |      |      |      em=emis_type
|      |      |      |      |      @ 23,39 GET em PICTURE '!'
|      |      |      |      |      READ
|      |      |      |      |      ok= ( AT(em,'PNS')>0 )
|      |      |      |      |      rdky=READKEY()
|      |      |      |      +---IF rdky=12 .OR. rdky=268
|      |      |      |      |      |      ok=.t.
|      |      |      |      +---ENDIF
|      |      |      +---ENDDO
|      |      +---IF .NOT. (rdky=12 .OR. rdky=268)
|      |      |      emis_type=em
|      |      +---ENDIF
|
|      * -- option for editing/adding standard
|      |      CASE optr="E"
|      |      |      DO epaedt
```

```
|
|
| * -- option for deleting standard
|   CASE optr="D"
|     DO epadlt
|
| * -- option for moving forward
|   CASE optr="F"
|     SEEK mst+STR(mreg,2)+emis_type
|     +---IF EOF()
|       |     SEEK mst +STR(mreg,2)
|       |     +---IF EOF()
|       |       |     SEEK mst
|       |       |     +---IF EOF()
|       |       |       |     c=SUBSTR(mst,1,1)
|       |       |       |     +---DO WHILE .NOT. EOF() .AND. c>"A"
|       |       |       |       |     SEEK c
|       |       |       |       |     +---IF EOF()
|       |       |       |       |       |     c=CHR(ASC(c)-1)
|       |       |       |       |     +---ENDIF
|       |       |       |     +---ENDDO
|       |       |       |     +---IF EOF()
|       |       |       |       |     GO top
|       |       |       |     +---ENDIF
|       |       |     +---ENDIF
|       |     +---ENDIF
|     +---ENDIF
|     +---DO WHILE .NOT. EOF() .AND. mst=state .AND. mreg=region ;
|       |     .AND. emis_type=emission
|       |     SKIP
|     +---ENDDO
|     +---IF .NOT. EOF()
|       |     mst=state
|       |     mreg=region
|       |     emis_type=emission
|     +---ENDIF
|
| * -- option for moving backward
|   CASE optr="B"
|     SEEK mst+STR(mreg,2)+emis_type
|     +---IF EOF()
|       |     SEEK mst +STR(mreg,2)
|       |     +---IF EOF()
|       |       |     SEEK mst
|       |       |     +---IF EOF()
|       |       |       |     c=SUBSTR(mst,1,1)
|       |       |       |     +---DO WHILE .NOT. EOF() .AND. c>"A"
|       |       |       |       |     SEEK c
|       |       |       |       |     +---IF EOF()
|       |       |       |       |       |     c=CHR(ASC(c)-1)
|       |       |       |       |     +---ENDIF
```

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Wed 01-11-89 16:32:44

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of 6
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```
| | | | | +---ENDDO
| | | | | +---IF EOF( )
| | | | | | GO top
| | | | | +---ENDIF
| | | | +---ENDIF
| | | +---ENDIF
| | +---ENDIF
| | SKIP -1
| | mst=state
| | mreg=region
| | emis_type=emission
| |
| * -- option for printing standard item list
| | CASE optr="P"
| | DO epaprt
| |
| * -- option for quitting
| | CASE optr="Q"
| |
| * -- end of possible actions
| +---ENDCASE
|
+---ENDDO

* -- finish up
CLOSE DATABASES
SET DELETED OFF
RETURN
```

01-11-89 15:00:00 EPADLT.PRG
Wed 01-11-89 16:33:12

Pg 1
of 1
1-47

```
*****
*- EPADLT.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- delete emission (epa) item
*****
*
@ 23,0 CLEAR TO 24,79
@ 23,2 SAY "Item to delete:"
@ 24,4 SAY "(0 or blank to return)"
cnum= ' '
@ 23,18 GET cnum PICTURE "#####"
READ

+-- IF VAL(cnum)<=0
|   RETURN
+--ENDIF

    SELECT 1

        * search for particular item
        SEEK mst +STR(mreg,2) +emis_type
        i=0
        j=VAL(cnum)-1
+--DO WHILE i<j .AND. state=mst .AND. region=mreg .AND. ;
|   emis_type=emission .AND. .NOT. EOF()
|   i=i+1
|   SKIP
+--ENDDO

        * if skipped past legitimate items, go thru loop
+--IF EOF() .OR. state<>mst .OR. region<>mreg .OR. emis_type<>emission
|   RETURN
+--ENDIF

        * ask user to confirm deletion
        ok=.f.
        @ 23,30 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
        READ

+--IF ok
|   DELETE
+--ENDIF

    RETURN
```

01-11-89 15:00:00 EPADLT.PRG
Wed 01-11-89 16:45:05

Pg 1
of 1
1-47

```
*****
*- EPADLT.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- delete emission (epa) item
*****
*
@ 23,0 CLEAR TO 24,79
@ 23,2 SAY "Item to delete:"
@ 24,4 SAY "(0 or blank to return)"
cnum=
@ 23,18 GET cnum PICTURE "#####"
READ

+--IF VAL(cnum)<=0
|   RETURN
+--ENDIF

SELECT 1

* search for particular item
SEEK mst +STR(mreg,2) +emis_type
i=0
j=VAL(cnum)-1
+--DO WHILE i<j .AND. state=mst .AND. region=mreg .AND. ;
|   emis_type=emission .AND. .NOT. EOF()
|   i=i+1
|   SKIP
+--ENDDO

* if skipped past legitimate items, go thru loop
+--IF EOF() .OR. state<>mst .OR. region<>mreg .OR. emis_type<>emission
|   RETURN
+--ENDIF

* ask user to confirm deletion
ok=.f.
@ 23,30 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
READ

+--IF ok
|   DELETE
+--ENDIF

RETURN
```

01-11-89 15:00:00 EPAEDT.PRG
Wed 01-11-89 16:33:21

Pg 1
of 5
1-50

```
*****
*- EPAEDT.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- edit epa item
*****
*
@ 23,0 CLEAR TO 24,79
@ 23,2 SAY "Item to edit:"
@ 24,2 SAY "[+] to add new item"
cnum=
@ 23,16 GET cnum PICTURE "#####"
READ

+--IF VAL(cnum)<=0 .AND. AT('+',cnum)=0
|   RETURN
+--ENDIF

SELECT 1

+--IF AT('+',cnum)>0
|   APPEND BLANK
|   REPLACE state WITH mst, region WITH mreg, emission WITH emis_type
|
+--ELSE
|   * search for particular item
|   SEEK mst +STR(mreg,2) +emis_type
|   i=0
|   j=VAL(cnum)-1
|   +--DO WHILE i<j .AND. state=mst .AND. region=mreg .AND. ;
|   |   emis_type=emission .AND. .NOT. EOF()
|   |   i=i+1
|   |   SKIP
|   +--ENDDO
+--ENDIF

* if skipped past legitimate items, go thru loop
+--IF EOF()
|   RETURN
+--ENDIF

* otherwise, ask for new values
mlo=low_end
mhi=hi_end
mln=Intyp
mgrp=grp
mcoal=coal_type
mv1=v1
```

mv2=v2
mv3=v3
mv4=v4
ans="-"

* -- display information

CLEAR

@ 2,68 SAY "Last change"

@ 3,71 SAY last_chg

@ 2,5 SAY "Input range of application - Low: High:"

@ 3,5 SAY "in MMBtu/hr (enter 0 & 99999.99 for lower and upper limits)"

@ 5,5 SAY "Group identifier:"

@ 6,5 SAY "(to be used when more than one item is applicable for a given range)"

@ 8,5 SAY "Coal type covered:"

@ 9,7 SAY "[A] - anthracite [L] - lignite [] - all"

@ 10,7 SAY "[B] - bituminous [S] - sub-bituminous"

@ 12,5 SAY "Line type for emissions: Value"

@ 13,10 SAY "1 - constant (lb/MMBtu)"

@ 14,10 SAY "2 - line (lb/MMBtu)"

@ 15,10 SAY "3 - power (lb/MMBtu)"

@ 16,10 SAY "4 - wt % coal"

@ 17,10 SAY "5 - % reduction"

@ 18,10 SAY "6 - ppm exhaust Function:"

@ 19,10 SAY "7 - % exhaust"

@ 20,10 SAY "8 - grains / SCF"

@ 21,10 SAY "9 - lb/million Btu"

@ 22,9 SAY "10 - lb/hr"

@ 23,10 SAY "Accept and save / Change values / Quit without saving"

@ 24,10 SAY "option: "

@ 2,39 GET mlo PICTURE "#####.##"

@ 2,55 GET mhi PICTURE "#####.##"

@ 5,23 GET mgrp PICTURE "!"

@ 8,24 GET mcoal PICTURE "!"

@ 12,30 GET mln PICTURE "####"

@ 13,40 CLEAR TO 16,79

@ 19,43

+--DO CASE

| CASE mln=1

| @ 19,43 SAY 'emis= {V1} * input'

| @ 13,43 SAY "V1:"

| @ 13,47 GET mv1 PICTURE "#####.####"

| CASE mln=2

| @ 19,43 SAY 'emis= {V1} - {V2} for low - hi'

| @ 13,43 SAY "V1:"

| @ 14,43 SAY "V2:"

| @ 13,47 GET mv1 PICTURE "#####.####"

```
|      @ 14,47 GET mv2 PICTURE "####.####"
|
| CASE mln=3
|   @ 19,43 SAY 'emis= {V1} * input ^ {V2}'
|   @ 13,43 SAY "V1:"
|   @ 14,43 SAY "V2:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|   @ 14,47 GET mv2 PICTURE "####.####"
|
| CASE mln=4
|   @ 19,43 SAY 'emis= {V1} wt % coal'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=5
|   @ 19,43 SAY 'emis= {V1} % reduction'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=6
|   @ 19,43 SAY 'emis= {V1} ppm in exhaust'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=7
|   @ 19,43 SAY 'emis= {V1} % in exhaust'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=8
|   @ 19,43 SAY 'emis= {V1} grains / SCF exhaust'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=9
|   @ 19,43 SAY 'emis= {V1} lb/million Btu input'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
| CASE mln=10
|   @ 19,43 SAY 'emis= {V1} lb/hr exhaust'
|   @ 13,43 SAY "V1:"
|   @ 13,47 GET mv1 PICTURE "####.####"
|
+--ENDCASE
  CLEAR GETS

  ans=" "

+--DO WHILE AT(ans,"AQ")=0
```



```
|      @ 2,39 GET mlo PICTURE "#####.##"  
|      READ  
|      @ 2,55 GET mhi PICTURE "#####.##"  
|      READ  
|      @ 5,23 GET mgrp PICTURE "!"  
|      READ  
|      @ 8,24 GET mcoal PICTURE "!"  
|      READ  
|  
|      ok=.f.  
|      +--DO WHILE .NOT. ok  
|      |      @ 12,30 GET mln PICTURE "####"  
|      |      READ  
|      |      ok = mln>0 .AND. mln<11  
|      +--ENDDO  
|  
|      @ 13,40 CLEAR TO 16,79  
|      @ 19,43  
|  
|      +--DO CASE  
|      |      CASE mln=1  
|      |      |      @ 19,43 SAY 'emis= {V1} * input'  
|      |      |      @ 13,43 SAY "V1:"  
|      |      |      @ 13,47 GET mv1 PICTURE "#####.####"  
|      |      |      READ  
|      |  
|      |      CASE mln=2  
|      |      |      @ 19,43 SAY 'emis= {V1} - {V2} for low - hi'  
|      |      |      @ 13,43 SAY "V1:"  
|      |      |      @ 14,43 SAY "V2:"  
|      |      |      @ 13,47 GET mv1 PICTURE "#####.####"  
|      |      |      @ 14,47 GET mv2 PICTURE "#####.####"  
|      |      |      READ  
|      |  
|      |      CASE mln=3  
|      |      |      @ 19,43 SAY 'emis= {V1} * input ^ {V2}'  
|      |      |      @ 13,43 SAY "V1:"  
|      |      |      @ 14,43 SAY "V2:"  
|      |      |      @ 13,47 GET mv1 PICTURE "#####.####"  
|      |      |      @ 14,47 GET mv2 PICTURE "#####.####"  
|      |      |      READ  
|      |  
|      |      CASE mln=4  
|      |      |      @ 19,43 SAY 'emis= {V1} wt % coal'  
|      |      |      @ 13,43 SAY "V1:"  
|      |      |      @ 13,47 GET mv1 PICTURE "#####.####"  
|      |      |      READ  
|      |  
|      |      CASE mln=5  
|      |      |      @ 19,43 SAY 'emis= {V1} % reduction'
```

```
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
|      READ  
  
|      CASE mln=6  
|      @ 19,43 SAY 'emis= {V1} ppm in exhaust'  
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
|      READ  
  
|      CASE mln=7  
|      @ 19,43 SAY 'emis= {V1} % in exhaust'  
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
|      READ  
  
|      CASE mln=8  
|      @ 19,43 SAY 'emis= {V1} grains / SCF exhaust'  
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
  
|      CASE mln=9  
|      @ 19,43 SAY 'emis= {V1} lb/million Btu input'  
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
  
|      CASE mln=10  
|      @ 19,43 SAY 'emis= {V1} lb/hr exhaust'  
|      @ 13,43 SAY "V1:"  
|      @ 13,47 GET mv1 PICTURE "####.####"  
  
|      +---ENDCASE  
  
|      ans=" "  
|      +---DO WHILE AT(ans,"ACQ")=0  
|      |      ans=" "  
|      |      @ 24,18 GET ans PICTURE "!"  
|      |      READ  
|      +---ENDDO  
  
|      +---ENDDO  
  
+---IF ans="A"  
|      REPLACE low_end WITH mlo, hi_end WITH mhi, Intyp WITH mln, ;  
|      grp WITH mgrp, coal_type WITH mcoal, v1 WITH mv1, ;  
|      v2 WITH mv2, v3 WITH mv3, v4 WITH mv4, last_chg WITH DATE()  
+---ENDIF  
RETURN
```

```
*****
*- EPAPRT.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- epa emission regulation data printout routine
*****
*
* check to see if any records present
+--IF RECCOUNT()=0
|   @ 23,0 CLEAR
|   @ 23,10 SAY "At least one emission item must be in file ";
|   +"to select print option."
|   ans=" "
|   @ 24,10 SAY "Press any key to continue..." GET ans
|   READ
|   ans=" "
|   RETURN
+--ENDIF

* if running stand-alone, values won't be defined
+--IF TYPE("topmgn")="U"
|   topmgn=1
+--ENDIF
+--IF TYPE("btmmgn")="U"
|   btmmgn=59
+--ENDIF
+--IF TYPE("lftmgn")="U"
|   lftmgn=10
+--ENDIF

* store current record being display so it isn't lost
rc=RECNO()

* set up variables
stlst=''
pg=0

* find out from user how many bases to print
@ 23,0 CLEAR
@ 23,4 SAY "Print items that are Displayed, items for one State, ";
+"All items, or "
@ 24,4 SAY "Quit (cancel print) -- Option ( D / S / A / Q )      ";
+CHR(174) +" " +CHR(175)
ans=" "
+--DO WHILE AT(ans,"DSAQ")=0
|   ans=" "
|   @ 24,58 GET ans PICTURE "!"
```

```
|      READ
+---ENDDO

      * if quit is selected, just return without changing a thing
+---IF ans="Q"
|      ans=" "
|      RETURN
+---ENDIF

      * ask questions to see what state to print
+---IF ans="S"
|      @ 22,0 CLEAR
|      @ 22,5 SAY "Enter state for information printout:"
|
|      * get verified state entry
|      st=SPACE(20)
|      ok=.f.
|      +---DO WHILE .NOT. ok
|      |      st=SPACE(20)
|      |      st|st=""
|      |      @ 22,48 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"
|      |      READ
|      |      rdky=READKEY()
|      |      +---IF rdky=12
|      |      |      RETURN
|      |      +---ENDIF
|      |      +---IF LEN(TRIM(st))>0
|      |      |      DO chkstate
|      |      +---ENDIF
|      +---ENDDO
|      mst=TRIM(st)
+---ENDIF

      * if only displayed values wanted, get them
+---IF ans="D"
|      SEEK mst+STR(mreg,2)+emis_type
+---ENDIF

      * if single state wanted, go to first entry
+---IF ans="S"
|      SEEK mst
+---ENDIF

      * if all fields to be printed, go to top of file
+---IF ans="A"
|      GO top
+---ENDIF

      * set escape off to be able to trap it with inkey statement
SET ESCAPE OFF
```

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abt=.f.

* print message about printing information

@ 22,0 CLEAR

@ 23,10 SAY "Printing in progress. Press <ESC> to quit early..."

* set up printer

SET MARGIN TO lftmgn

SET DEVICE TO PRINT

prevst=state

* loop for printing base information

+--DO WHILE .NOT. EOF() .AND. .NOT. abt

|

| * first check for keys pressed

|

| c=1

| * loop until no more keys present

|

| +--DO WHILE c<>0

|

| | c=INKEY()

| * if key pressed was escape, then set flag to abort early

|

| | +--IF c=27

|

| | | abt=.t.

|

| | +--ENDIF

|

| +--ENDDO

|

| * if abort flag set, jump to bottom of loop

|

| +--IF abt

|

| | LOOP

|

| +--ENDIF

|

| * check to see about printing state dividing line on page

|

| +--IF PROW()+2<=btmmgn .AND. state<>prevst

|

| | @ PROW()+2,0 SAY REPLICATE("=",70)

|

| | prevst=state

|

| +--ENDIF

|

| +--IF pg=0 .OR. PROW()+6>btmmgn

|

| | pg=pg+1

|

| | @ topmgn,0 SAY "EPA Emission Regulation Information Printout"

|

| | @ PROW(),60 SAY "Page " +LTRIM(STR(pg))

|

| | prevst=state

|

| +--ENDIF

|

| * go to item print routine

|

| DO epaprt1

|

| * skip to next entry

|

| SKIP

|

| * if only one state wanted, check to see if a new state has shown up

|

| +--IF ans="S"

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```
| * if skip has moved to a new state, go to bottom, then one past for
| * hitting the EOF (end-of-file)
| |   +---IF mst<>state
| | |   CO BOTTOM
| | |   SKIP
| |   +---ENDIF
| +---ENDIF
|
| * if only the displayed base is wanted, skip to bottom
| +---IF ans="D"
| |   +---IF state<>mst .OR. region<>mreg .OR. emission<>emis_type
| | |   CO BOTTOM
| | |   SKIP
| |   +---ENDIF
| +---ENDIF
|
+---ENDDO

* go back to original record being displayed
COTO rc

* move back to top of page, and reset values back to normal
EJECT
SET F$CAPE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0
RETURN
```

01-11-89 15:00:00 EPAPRT1.PRG
Wed 01-18-89 16:37:50

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```
*****
*- EPAPRT1.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- print epa item
*****
*

* first print state
SELECT 1
st=state
stlst=""
DO idstate
@ PROW()+2,0 SAY "State: " +st + " -- " +stlst

* print emission type
@ PROW(),40 SAY "Emission type: "
+--DO CASE
| CASE emission="P"
|   @ PROW(),56 SAY "particulates"
| CASE emission="N"
|   @ PROW(),56 SAY "NOx"
| CASE emission="S"
|   @ PROW(),56 SAY "SOx"
| OTHERWISE
|   @ PROW(),56 SAY "*** unknown ***"
+--ENDCASE

* then establish region
+--IF region>0
| SELECT 2
| SEEK st+STR(epadata->region,2)
| +--IF .NOT. EOF()
| | @ PROW()+1,0 SAY "Region: " +LTRIM(STR(region)) + " -- " +desc
| +--ELSE
| | @ PROW()+1,0 SAY "Region: " +LTRIM(STR(epadata->region)) ;
| | + " -- *** not specified ***"
| +--ENDIF
| SELECT 1
+--ENDIF

* print input range of applicability
@ PROW()+1,0 SAY "Applicability input range: " ;
+STR( low_end, 8, 2) + " MMBtu/hr to " +STR( hi_end, 8, 2) + " MMBtu/hr"

* print group identifier and type of coal
@ PROW()+1,0 SAY "Group ID: " +grp
@ PROW(),15 SAY "Type of coal: "
```

```
+--DO CASE
|   CASE coal_type+"|" ="|"
|       @ PROW(),29 SAY "-- all --"
|   CASE coal_type ="A"
|       @ PROW(),29 SAY "anthracite"
|   CASE coal_type ="L"
|       @ PROW(),29 SAY "lignite"
|   CASE coal_type ="B"
|       @ PROW(),29 SAY "bituminous"
|   CASE coal_type ="S"
|       @ PROW(),29 SAY "sub-bituminous"
+--ENDCASE

* print last changed date
@ PROW(),48 SAY "Last changed: "+ DTOC(last_chg)

* convert numeric values to string values for printing
cv1 = "|" +LTRIM(STR(v1,20,10))
+--DO WHILE SUBSTR(cv1,LEN(cv1),1)="0"
|   cv1 =SUBSTR(cv1,1,LEN(cv1)-1)
+--ENDDO
+--IF SUBSTR(cv1,LEN(cv1),1)="."
|   cv1=SUBSTR(cv1,1,LEN(cv1)-1)
+--ENDIF
+--IF LEN(cv1)=1
|   cv1 ="0"
+--ELSE
|   cv1 =SUBSTR(cv1, 2)
+--ENDIF

cv2 = "|" +LTRIM(STR(v2,20,10))
+--DO WHILE SUBSTR(cv2,LEN(cv2),1)="0"
|   cv2 =SUBSTR(cv2,1,LEN(cv2)-1)
+--ENDDO
+--IF SUBSTR(cv2,LEN(cv2),1)="."
|   cv2=SUBSTR(cv2,1,LEN(cv2)-1)
+--ENDIF
+--IF LEN(cv2)=1
|   cv2 ="0"
+--ELSE
|   cv2 =SUBSTR(cv2, 2)
+--ENDIF

cv3 = "|" +LTRIM(STR(v3,20,10))
+--DO WHILE SUBSTR(cv3,LEN(cv3),1)="0"
|   cv3 =SUBSTR(cv3,1,LEN(cv3)-1)
+--ENDDO
+--IF SUBSTR(cv3,LEN(cv3),1)="."
|   cv3=SUBSTR(cv3,1,LEN(cv3)-1)
+--ENDIF
```



```

+--IF LEN(cv3)=1
|   cv3 ="0"
+--ELSE
|   cv3 =SUBSTR(cv3, 2)
+--ENDIF

    cv4 = "|" +LTRIM(STR(v4,20,10))
+--DO WHILE SUBSTR(cv4,LEN(cv4),1)="0"
|   cv4 =SUBSTR(cv4,1,LEN(cv4)-1)
+--ENDDO
+--IF SUBSTR(cv4,LEN(cv4),1)="."
|   cv4=SUBSTR(cv4,1,LEN(cv4)-1)
+--ENDIF
+--IF LEN(cv4)=1
|   cv4 ="0"
+--ELSE
|   cv4 =SUBSTR(cv4, 2)
+--ENDIF

    * create entire emissions string for printout

    s= "*** unspecified emission regulation ***"
+--DO CASE
|   CASE Intyp=1
|   * emis= {V1} * input
|       s= "emissions [lb/hr] = " +cv1 +" * input [10^6 Btu/hr]"
|
|   CASE Intyp=2
|   * emis= {V1} - {V2} for low - hi
|       s= "emissions [lb/hr] = ( " +cv1 +" @ low -- " +cv2 ;
|       + " @ high ) * input [10^6 Btu/hr]"
|
|   CASE Intyp=3
|   * emis= {V1} * input ^ {V2}
|       s= "emissions [lb/hr] = " +cv1 +" * input ^ " +cv2 +" [10^6 Btu/hr]"
|
|   CASE Intyp=4
|   * emis= {V1} wt % coal
|       s= "allowed input = " +cv1 +" % wt coal"
|
|   CASE Intyp=5
|   * emis= {V1} % reduction
|       s= "reduction = " +cv1 +" %"
|
|   CASE Intyp=6
|   * emis= {V1} ppm in exhaust
|       s= "emissions = " +cv1 +" ppm in exhaust"
|
|   CASE Intyp=7
|   * emis= {V1} % in exhaust
```

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Wed 01-18-89 16:37:50

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```
|      s= "emissions = " +cv1 +" % in exhaust"  
|  
|      CASE Intyp=8  
|      * emis= {V1} grains / SCF exhaust  
|      s= "emissions = " +cv1 +" grains / SCF exhaust"  
|  
|      CASE Intyp=9  
|      * emis= {V1} lb/million Btu input  
|      s= "emissions = " +cv1 +" lb/million Btu input"  
|  
|      CASE Intyp=10  
|      * emis= {V1} lb/hr exhaust  
|      s= "emissions = " +cv1 +" lb/hr "  
|  
+--ENDCASE  
  
      * print emission string  
      @ PROW()+1,0 SAY s  
  
      RETURN
```

```
*****
*- EPARGN.PRG -- Last Update 01/11/89
*- Copyright (c) 1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- epa region editing routine
*****
*
```

```
ans=" "
mreg=-1
more=.f.
SET DELETED ON
dltdpck=.f.
SELECT 2
SEEK mst
```

```
+---DO WHILE ans<>"Q"
|   CLEAR
|   @ 1,0 SAY "Region Description"
|   @ 2,10 SAY "no regions"
|   +---IF .NOT. EOF()
|   |   frstrec=RECNO()
|   |   currec=RECNO()
|   |   i=2
|   |   +---DO WHILE .NOT. EOF() .AND. i<20 .AND. mst=state
|   |   |   @ i,2 SAY region
|   |   |   @ i,6 SAY desc
|   |   |   i=i+1
|   |   |   lstrec=RECNO()
|   |   |   SKIP
|   |   +---ENDDO
|   |   GOTO currec
|   +---ENDIF
|
|   @ 22,0 TO 22,79 double
|   @ 23,5 SAY "Edit / Add / Delete / Forward / Backward / Print / Quit"
|   @ 24,5 SAY "Option (E/A/D/F/B/P/Q)" " +CHR(174) +" " +CHR(175)
|   ans=" "
|   +---DO WHILE AT(ans,"EADFBPQ")=0
|   |   ans=" "
|   |   @ 24,38 GET ans PICTURE "!"
|   |   READ
|   +---ENDDO
|
|   +---IF ans="Q"
|   |   LOOP
|   +---ENDIF
```

```
|  +---IF ans="F"
|  |      GOTO lstrec
|  |      SKIP
|  |      +---IF EOF() .OR. state<>mst
|  |      |      SEEK mst
|  |      +---ENDIF
|  |      LOOP
|  +---ENDIF
|
|  +---IF ans="B"
|  |      SKIP -18
|  |      +---IF state<>mst
|  |      |      SEEK mst
|  |      +---ENDIF
|  |      LOOP
|  +---ENDIF
|
|  +---IF ans<>"A" .AND. ans<>"P"
|  |      @ 23,0 CLEAR
|  |      @ 23,10 SAY CHR(24) +CHR(25) +" to select region to ";
|  |      +IIF(ans="E","edit","delete") +", <ENTER> to accept"
|  |
|  |      ok=.f.
|  |      i=2
|  |      +---DO WHILE .NOT. ok
|  |      |      @ i,1 GET region
|  |      |      @ i,5 GET desc
|  |      |      CLEAR GETS
|  |      |      cq=1
|  |      |      +---DO WHILE AT( CHR(cq),CHR(13)+CHR(5)+CHR(24) )=0
|  |      |      |      cq=INKEY()
|  |      |      +---ENDDO
|  |      |      +---DO CASE
|  |      |      |      CASE cq=5
|  |      |      |      +---IF RECNO(<>frstrec
|  |      |      |      |      @ i,1 SAY region
|  |      |      |      |      @ i,5 SAY desc
|  |      |      |      |      SKIP -1
|  |      |      |      |      i=i-1
|  |      |      |      +---ENDIF
|  |      |      |      CASE cq=24
|  |      |      |      +---IF RECNO(<>lstrec
|  |      |      |      |      @ i,1 SAY region
|  |      |      |      |      @ i,5 SAY desc
|  |      |      |      |      SKIP
|  |      |      |      |      i=i+1
|  |      |      |      +---ENDIF
|  |      |      |      CASE cq=13
|  |      |      |      ok=.t.
|  |      |      +---ENDCASE
|  |      +---ENDWHILE
|  |      ok=.t.
```

```
|      |      +---ENDDDO
|      |      +---ENDIF
|
|      |      * if deleting is wanted, get user to confirm it
|      |      +---IF ans="D"
|      |      |      @ 23,0 CLEAR
|      |      |      +---IF .NOT. EOF()
|      |      |      |      ok=.f.
|      |      |      |      @ 23,2 SAY "Delete this region? (Y/N)" ;
|      |      |      |      GET ok PICTURE "Y"
|      |      |      |      READ
|      |      |      |      +---IF ok
|      |      |      |      |      mreg=region
|      |      |      |      |      SELECT 1
|      |      |      |      |      SEEK mst+STR(mreg,2)
|      |      |      |      |      epacnt=0
|      |      |      |      |      +---DO WHILE state=mst .AND. region=mreg ;
|      |      |      |      |      |      .AND. .NOT. EOF()
|      |      |      |      |      |      epacnt=epacnt+1
|      |      |      |      |      |      SKIP
|      |      |      |      |      +---ENDDDO
|      |      |      |      |      SELECT 2
|      |      |      |      |      +---IF epacnt>0
|      |      |      |      |      |      @ 24,2 SAY "You will also be deleting " ;
|      |      |      |      |      |      +LTRIM(STR(epacnt)) +" emission regulation ";
|      |      |      |      |      |      +"entries."
|      |      |      |      |      +---ENDIF
|      |      |      |      |      ok=.f.
|      |      |      |      |      @ 23,35 SAY "Are you sure? (Y/N)" ;
|      |      |      |      |      GET ok PICTURE "Y"
|      |      |      |      |      READ
|      |      |      |      |      +---IF ok
|      |      |      |      |      |      REPLACE region WITH -1
|      |      |      |      |      |      DELETE
|      |      |      |      |      |      SELECT 1
|      |      |      |      |      |      SEEK mst+STR(mreg,2)
|      |      |      |      |      |      +---DO WHILE state=mst .AND. region=mreg ;
|      |      |      |      |      |      |      .AND. .NOT. EOF()
|      |      |      |      |      |      |      DELETE
|      |      |      |      |      |      |      SKIP
|      |      |      |      |      |      +---ENDDDO
|      |      |      |      |      |      SELECT 2
|      |      |      |      |      |      dltdpck=.t.
|      |      |      |      |      |      SEEK mst
|      |      |      |      |      +---ENDIF
|      |      |      |      +---ENDIF
|      |      |      +---ENDIF
|      |      +---ENDIF
|      +---ENDIF
|      LOOP
|      +---ENDIF
```

```
| * clear bottom of screen for editing, adding
|   @ 23,0 CLEAR
|
| * if a region is to be added
|   +---IF ans="A"
|   |   SEEK mst
|   |   maxrgn=-1
|   |   +---DO WHILE mst=state .AND. .NOT. EOF()
|   |   |   +---IF maxrgn<region
|   |   |   |   maxrgn=region
|   |   |   +---ENDIF
|   |   |   SKIP
|   |   +---ENDDO
|   |   @ 23,2 SAY "Region number: "
|   |   ok=.f.
|   |   +---DO WHILE .NOT. ok
|   |   |   mreg=maxrgn+1
|   |   |   @ 23,17 GET mreg PICTURE "##"
|   |   |   READ
|   |   |   @ 24,0
|   |   |   +---IF mreg>0
|   |   |   |   SEEK mst+STR(mreg,2)
|   |   |   |   +---IF EOF()
|   |   |   |   |   ok=.t.
|   |   |   |   +---ELSE
|   |   |   |   |   @ 24,2 SAY "This region number ( " ;
|   |   |   |   |   +LTRIM(STR(mreg)) +" ) is already in use. ";
|   |   |   |   |   +"Please try another."
|   |   |   |   +---ENDIF
|   |   |   +---ELSE
|   |   |   |   @ 24,2 SAY "A region number must be greater than 0"
|   |   |   +---ENDIF
|   |   +---ENDDO
|   |
|   |   APPEND BLANK
|   |   REPLACE state WITH mst, region WITH mreg
|   |   ans="E"
|   |   @ 23,0
|   +---ENDIF
|
|   +---IF ans="E"
|   |   @ 23,3 SAY "Region: " +LTRIM(STR(region))
|   |   @ 24,5 SAY "Desc:" GET desc
|   |   READ
|   |   LOOP
|   +---ENDIF
|
| * printing request
|   +---IF ans="P"
```

```
|
|
| * check to see if any records present
| |   +---IF RECCOUNT()=0
| | |   @ 23,0 CLEAR
| | |   @ 23,10 SAY "At least one base must be in file to select print
| | |   option."
| | |   ans=" "
| | |   @ 24,10 SAY "Press any key to continue..." GET ans
| | |   READ
| | |   ans=" "
| | |   RETURN
| |   +---ENDIF
|
| * if running stand-alone, values won't be defined
| |   +---IF TYPE("topmgn")="U"
| | |   topmgn=0
| |   +---ENDIF
| |   +---IF TYPE("btmmgn")="U"
| | |   btmmgn=58
| |   +---ENDIF
| |   +---IF TYPE("lftmgn")="U"
| | |   lftmgn=0
| |   +---ENDIF
|
| * store current record being display so it isn't lost
| |   rc=RECNO()
|
| * set up variables
| |   stlst=''
| |   pg=0
|
| * find out from user how many bases to print
| |   @ 23,0 CLEAR
| |   @ 23,4 SAY "print regions for current State, ";
| |   +"regions for All states, or Quit"
| |   @ 24,4 SAY "Option (S/A/Q)      " +CHR(174) +" " +CHR(175)
| |   ans=" "
| |   +---DO WHILE AT(ans,"SAQ")=0
| | |   ans=" "
| | |   @ 24,24 GET ans PICTURE "!"
| | |   READ
| |   +---ENDDO
|
| * if quit is selected, just return without changing a thing
| |   +---IF ans="Q"
| | |   ans=" "
| | |   LOOP
| |   +---ENDIF
|
| * if currently displayed state wanted, go to first entry
```

```
| | +--IF ans="S"
| | |   SEEK mst
| | +--ENDIF
| |
| * if all fields to be printed, go to top of file
| | +--IF ans="A"
| | |   GO top
| | +--ENDIF
| |
| * set escape off to be able to trap it with inkey statement
| |   SET ESCAPE OFF
| |   abt=.f.
| |
| * print message about printing information
| |   @ 23,0 CLEAR
| |   @ 23,10 SAY "Printing in progress. Press <ESC> to quit early..."
| |
| * set up printer
| |   SET MARGIN TO lftmgn
| |   SET DEVICE TO PRINT
| |
| * define initial heading for printing
| |   st=state
| |   DO chkstate
| |   hdg="Region Listing for: " +state +" - " +stlst
| |   prevst=st
| |
| * loop for printing base information
| |   +--DO WHILE .NOT. EOF() .AND. .NOT. abt
| |   |
| |   * first check for keys pressed
| |   |   c=1
| |   * loop until no more keys present
| |   |   +--DO WHILE c<>0
| |   |   |   c=INKEY()
| |   * if key pressed was escape, then set flag to abort early
| |   |   |   +--IF c=27
| |   |   |   |   abt=.t.
| |   |   |   +--ENDIF
| |   |   +--ENDDO
| |   |
| |   * if abort flag set, jump to bottom of loop
| |   |   +--IF abt
| |   |   |   LOOP
| |   |   +--ENDIF
| |   |
| |   * if new page required, print heading first
| |   |   +--IF pg=0 .OR. PROW()+1>btmmgn
| |   |   |   +--IF pg=0
| |   |   |   |   @ topmgn,0 SAY hdg
```



```
| | | | +---ELSE
| | | | | @ topmgn.0 SAY hdg +", cont"
| | | | +---ENDIF
| | | | pg=pg+1
| | | | @ topmgn.60 SAY "Page " +LTRIM(STR(pg))
| | | | @ PROW()+2.0 SAY "Region Description"
| | | +---ENDIF
| |
| * advance to next page for a new state
| | +---IF prevst<>state
| | | st=state
| | | DO chkstate
| | | hdg="Region Listing for: " +state + " - ";
| | | +stlst
| | | +---IF PROW()+6>btmmgn
| | | | pg=pg+1
| | | | @ topmgn.0 SAY hdg
| | | | @ PROW().60 SAY "Page " +LTRIM(STR(pg))
| | | +---ELSE
| | | | @ PROW()+2.0 SAY REPLICATE("-",70)
| | | | @ PROW()+1.0 SAY hdg
| | | +---ENDIF
| | | @ PROW()+2.0 SAY "Region Description"
| | | prevst=state
| | +---ENDIF
|
| * print information
| | @ PROW()+1.2 SAY region
| | @ PROW().8 SAY desc
|
| * skip to next entry
| | SKIP
|
| * if only one state wanted, check to see if a new state has shown up
| | +---IF ans="S"
| * if skip has moved to a new state, go to bottom, then one past for
| * hitting the EOF (end-of-file)
| | +---IF mst<>state
| | | GO BOTTOM
| | | SKIP
| | +---ENDIF
| +---ENDIF
|
| +---ENDDO
|
| * go back to original state being displayed
| | SEEK mst
|
| * move back to top of page, and reset values back to normal
```

01-11-89 15:00:00 EPARGN.PRG
Wed 01-11-89 16:34:26

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of 8
350-368

```
| | EJECT  
| | SET ESCAPE ON  
| | SET DEVICE TO SCREEN  
| | SET MARGIN TO 0  
| |  
| +--ENDIF  
|  
|  
+--ENDDO  
  
SET DELETED OFF  
+--IF dlt dpck  
| SELECT 2  
| PACK  
| SELECT 1  
| PACK  
+--ENDIF  
  
RETURN
```

01-11-89 15:00:00 EPAST.PRG
Wed 01-11-89 16:35:24

Pg 1
of 3
1-50

```
*****
*- EPAST.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- epa state/region selection
*****
*
@ 23,0 CLEAR
@ 24,2 SAY 'Enter two-letter state abbreviation or name'
ok=.f.
+--DO WHILE .NOT. ok
|   st=mst+SPACE(18)
|   stlst=""
|   @ 4,11 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"
|   READ
|   rdky=READKEY()
|   +--IF rdky=12 .OR. rdky=268
|   |   ok=.t.
|   |   st=""
|   +--ELSE
|   |   DO chkstate
|   +--ENDIF
+--ENDDO
+--IF rdky=12 .OR. rdky=268
|   st=mst
|   DO idstate
+--ELSE
|   mst=st
+--ENDIF
@ 4,11 SAY SPACE(25)
@ 4,11 SAY mst + " - " +stlst
mreg=-1
more=.f.
+--DO WHILE mreg<0
|   creg=' '
|   @ 23,1 CLEAR TO 24,78
|   @ 23,2 SAY 'Enter region of ' +stlst + ' to review: '
|   i=COL()
|   +--IF .NOT. more
|   |   @ 24,2 SAY '0=entire state    ?=display list'
|   +--ELSE
|   |   @ 24,2 SAY '0=entire state    M=display more'
|   +--ENDIF
|   @ 23,i GET creg PICTURE "!!!!!"
|   READ
|
|   * if ? present, display list of regions
|   +--IF '?' $ creg
```

```
|      CLEAR
|      ir=1
|      ic=1
|      SELECT 2
|      SEEK mst
|      @ 1,5 SAY "no regions"
|      +---DO WHILE .NOT. EOF() .AND. ir<23 .AND. mst=state
|      |      +---IF region>0
|      |      |      @ ir,ic SAY region
|      |      |      @ ir,ic+4 SAY desc
|      |      |      ir=ir+1
|      |      +---ENDIF
|      |      SKIP
|      |      +---IF ir>22 .AND. .NOT. EOF()
|      |      |      more=.t.
|      |      +---ENDIF
|      +---ENDDO
|      LOOP
|      +---ENDIF
|
| * if M present, display more of regions
| +---IF 'm' $ LOWER(creg)
| |      CLEAR
| |      ir=1
| |      ic=1
| |      +---IF EOF() .OR. state<>mst
| |      |      SEEK mst
| |      +---ENDIF
| |      +---DO WHILE .NOT. EOF() .AND. ir<23 .AND. mst=state
| |      |      +---IF region>0
| |      |      |      @ ir,ic SAY region
| |      |      |      @ ir,ic+4 SAY desc
| |      |      |      ir=ir+1
| |      |      +---ENDIF
| |      |      SKIP
| |      |      +---IF ir>22 .AND. .NOT. EOF()
| |      |      |      more=.t.
| |      |      +---ELSE
| |      |      |      more=.f.
| |      |      +---ENDIF
| |      +---ENDDO
| |      LOOP
| +---ENDIF
|
| * else check for region
|      creg=LTRIM(TRIM(creg))
|
| * whole area (default) selected
| +---IF VAL(creg)=0
| |      +---IF LEN(creg)=1 .AND. creg='0'
```

01-11-89 15:00:00 EPAST.PRG
Wed 01-11-89 16:35:24

Pg 3
of 3
101-117

```
| | | mreg=0
| | | reg_desc='entire area'
| | +---ENDIF
| |
| * particular region selected
| +---ELSE
| | SELECT 2
| | SEEK mst + STR(VAL(creg),2)
| |
| * if region is present in file, reset to new region
| | +---IF .NOT. EOF()
| | | mreg=region
| | +---ENDIF
| +---ENDIF
|
+---ENDDO
RETURN
```

01-11-89 15:00:00 IDSTATE.PRG
Wed 01-11-89 16:05:02

Pg 1
of 3
1-50

```
*****
*- IDSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- using st, get state name
*****
*

* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stlst=""
+--DO CASE
| CASE st='AL'
|   stlst='Alabama'
| CASE st='AK'
|   stlst='Alaska'
| CASE st='AR'
|   stlst='Arkansas'
| CASE st='AZ'
|   stlst='Arizona'
| CASE st='CA'
|   stlst='California'
| CASE st='CO'
|   stlst='Colorado'
| CASE st='CT'
|   stlst='Connecticut'
| CASE st='DC'
|   stlst='District of Columbia'
| CASE st='DE'
|   stlst='Delaware'
| CASE st='FL'
|   stlst='Florida'
| CASE st='GA'
|   stlst='Georgia'
| CASE st='HI'
|   stlst='Hawaii'
| CASE st='ID'
|   stlst='Idaho'
| CASE st='IL'
|   stlst='Illinois'
| CASE st='IN'
|   stlst='Indiana'
| CASE st='IA'
|   stlst='Iowa'
| CASE st='KS'
|   stlst='Kansas'
| CASE st='KY'
|   stlst='Kentucky'
```

```
| CASE st='LA'  
|   stlst='Louisiana'  
| CASE st='ME'  
|   stlst='Maine'  
| CASE st='MD'  
|   stlst='Maryland'  
| CASE st='MA'  
|   stlst='Massachusetts'  
| CASE st='MI'  
|   stlst='Michigan'  
| CASE st='MN'  
|   stlst='Minnesota'  
| CASE st='MS'  
|   stlst='Mississippi'  
| CASE st='MO'  
|   stlst='Missouri'  
| CASE st='MT'  
|   stlst='Montana'  
| CASE st='NE'  
|   stlst='Nebraska'  
| CASE st='NV'  
|   stlst='Nevada'  
| CASE st='NH'  
|   stlst='New Hampshire'  
| CASE st='NJ'  
|   stlst='New Jersey'  
| CASE st='NM'  
|   stlst='New Mexico'  
| CASE st='NY'  
|   stlst='New York'  
| CASE st='NC'  
|   stlst='North Carolina'  
| CASE st='ND'  
|   stlst='North Dakota'  
| CASE st='OH'  
|   stlst='Ohio'  
| CASE st='OK'  
|   stlst='Oklahoma'  
| CASE st='OR'  
|   stlst='Oregon'  
| CASE st='PA'  
|   stlst='Pennsylvania'  
| CASE st='RI'  
|   stlst='Rhode Island'  
| CASE st='SC'  
|   stlst='South Carolina'  
| CASE st='SD'  
|   stlst='South Dakota'  
| CASE st='TX'  
|   stlst='Texas'
```

01-11-89 15:00:00 IDSTATE.PRG
Wed 01-11-89 16:05:02

Pg 3
of 3
101-120

```
| CASE st='TN'  
| stlst='Tennessee'  
| CASE st='US'  
| stlst='United States'  
| CASE st='UT'  
| stlst='Utah'  
| CASE st='VT'  
| stlst='Vermont'  
| CASE st='VA'  
| stlst='Virginia'  
| CASE st='WA'  
| stlst='Washington'  
| CASE st='WV'  
| stlst='West Virginia'  
| CASE st='WI'  
| stlst='Wisconsin'  
| CASE st='WY'  
| stlst='Wyoming'  
+--ENDCASE  
RETURN
```


01-11-89 15:00:00 SETCOLOR.PRG
Wed 01-11-89 16:08:17

Pg 1
of 1
1-23

```
*****
*- SETCOLOR.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*****
*- routine to set colors based on database entry
*****
*
* reset colors to desired values if necessary
+--IF FILE("colors.dbf")
|   USE colors
|   +--IF RECCOUNT(>)>0
|   |   c_lf=TRIM(lofg)
|   |   c_lb=TRIM(lobg)
|   |   c_hf=TRIM(hifg)
|   |   c_hb=TRIM(hibg)
|   |   c_bd=TRIM(brdr)
|   |   SET COLOR TO &c_lf./&c_lb., &c_hf./&c_hb., &c_bd
|   +--ENDIF
+--ENDIF
RELEASE ALL LIKE c_??
CLEAR
RETURN
```

Appendix B: Emission Regulations Data Listing

EPA Emission Regulation Information Printout

State: AK -- Alaska Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.05 grains / SCF exhaust

State: AK -- Alaska Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 500 ppm in exhaust

=====

State: AL -- Alabama Emission type: particulates
Applicability input range: 1.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.5 * input [10⁶ Btu/hr]

State: AL -- Alabama Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.38 * input ^ -0.44 [10⁶ Btu/hr]

State: AL -- Alabama Emission type: SOx
Region: 1 -- Category I County or Jefferson
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.8 * input [10⁶ Btu/hr]

State: AL -- Alabama Emission type: SOx
Region: 2 -- Category II Counties
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 4 * input [10⁶ Btu/hr]

=====

State: AZ -- Arizona Emission type: NOx
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: AZ -- Arizona Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 4200.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.02 * input ^ 0.769 [10⁶ Btu/hr]

State: AZ -- Arizona Emission type: particulates
Applicability input range: 4200.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 17 * input ^ 0.432 [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: AZ -- Arizona Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.8 * input [10⁶ Btu/hr]

=====

State: CA -- California Emission type: NOx
Region: 1 -- Mariposa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 1 -- Mariposa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 1 -- Mariposa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 1 -- Mariposa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 1 -- Mariposa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 2 -- Tuolumne County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 2 -- Tuolumne County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 2 -- Tuolumne County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 2 -- Tuolumne County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 2 -- Tuolumne County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 3 -- Northern Sierra AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 3 -- Northern Sierra AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 3 -- Northern Sierra AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 3 -- Northern Sierra AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 3 -- Northern Sierra AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: NOx
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 4 -- Tulare County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: particulates
Region: 5 -- North Coast Air Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 5 -- North Coast Air Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 1000 ppm in exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: NOx
Region: 6 -- Madera County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 6 -- Madera County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: particulates
Region: 6 -- Madera County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 6 -- Madera County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 6 -- Madera County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: NOx
Region: 7 -- Kern County APCD - Valley Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 7 -- Kern County APCD - Valley Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 7 -- Kern County APCD - Valley Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 7 -- Kern County APCD - Valley Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 7 -- Kern County APCD - Valley Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 8 -- Kern County APCD - Desert Basin
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

EPA Emission Regulation Information Printout

State: CA -- California Emission type: NOx
Region: 9 -- County of Siskiyou APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 9 -- County of Siskiyou APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.2 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 9 -- County of Siskiyou APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 10 -- Modoc County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 10 -- Modoc County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 10 -- Modoc County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: NOx
Region: 11 -- Imperial County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 11 -- Imperial County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 11 -- Imperial County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: NOx
Region: 12 -- Placer County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 12 -- Placer County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 12 -- Placer County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 12 -- Placer County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 12 -- Placer County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 13 -- Sutter County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 13 -- Sutter County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: NOx
Region: 14 -- Shasta County AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 300 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 14 -- Shasta County AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 14 -- Shasta County AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 15 -- Tehama County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 15 -- Tehama County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.15 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 15 -- Tehama County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 250 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 15 -- Tehama County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: NOx
Region: 16 -- Calaveras County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 16 -- Calaveras County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: particulates
Region: 16 -- Calaveras County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 16 -- Calaveras County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 16 -- Calaveras County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: particulates
Region: 17 -- Colusa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 17 -- Colusa County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 18 -- Great Basin Unified Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 18 -- Great Basin Unified Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 18 -- Great Basin Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 19 -- Yolo-Solano APCD
Applicability input range: 0.00 MMBtu/hr to 0.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 19 -- Yolo-Solano APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 19 -- Yolo-Solano APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 40 lb/hr

State: CA -- California Emission type: SOx
Region: 19 -- Yolo-Solano APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: particulates
Region: 20 -- Yuba County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 20 -- Yuba County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 21 -- San Bernardino APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 21 -- San Bernardino APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 500 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 21 -- San Bernardino APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: NOx
Region: 22 -- Lassen County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 22 -- Lassen County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 22 -- Lassen County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 22 -- Lassen County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 23 -- North Coast Unified AQMD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 23 -- North Coast Unified AQMD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 23 -- North Coast Unified AQMD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 23 -- North Coast Unified AQMD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 24 -- Sacramento County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 24 -- Sacramento County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 24 -- Sacramento County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 24 -- Sacramento County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 25 -- King County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 25 -- King County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 25 -- King County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 25 -- King County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 26 -- Butte County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 26 -- Butte County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 26 -- Butte County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 26 -- Butte County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 300 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 27 -- Ventura County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: NOx
Region: 28 -- South Coast AQMD
Applicability input range: 50.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 28 -- South Coast AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.56 * input [10⁶ Btu/hr]

State: CA -- California Emission type: NOx
Region: 29 -- Northern Sonoma County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 29 -- Northern Sonoma County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 29 -- Northern Sonoma County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 29 -- Northern Sonoma County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 30 -- Mendocino County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CA -- California Emission type: particulates
Region: 30 -- Mendocino County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 30 -- Mendocino County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: CA -- California Emission type: SOx
Region: 30 -- Mendocino County APCD
Applicability input range: 100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CA -- California Emission type: NOx
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: NOx
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 1775.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 300 ppm in exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: particulates
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 31 -- San Luis Obispo County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: NOx
Region: 32 -- San Joaquin County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: NOx
Region: 32 -- San Joaquin County APCD
Applicability input range: 1775.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 32 -- San Joaquin County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 32 -- San Joaquin County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 32 -- San Joaquin County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 32 -- San Joaquin County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: NOx
Region: 33 -- Merced County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: NOx
Region: 33 -- Merced County APCD
Applicability input range: 1775.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 225 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 33 -- Merced County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: particulates
Region: 33 -- Merced County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 33 -- Merced County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

EPA Emission Regulation Information Printout

State: CA -- California Emission type: NOx
Region: 34 -- Monterey Bay Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 34 -- Monterey Bay Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.15 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 34 -- Monterey Bay Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 34 -- Monterey Bay Unified APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: particulates
Region: 35 -- Bay Area AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.15 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 35 -- Bay Area AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.5 % wt coal

State: CA -- California Emission type: SOx
Region: 35 -- Bay Area AQMD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 300 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 36 -- Glenn County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.3 grains / SCF exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: SOx
Region: 36 -- Glenn County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: NOx
Region: 37 -- Stanislaus County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 37 -- Stanislaus County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: particulates
Region: 37 -- Stanislaus County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 37 -- Stanislaus County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: SOx
Region: 37 -- Stanislaus County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: NOx
Region: 38 -- El Dorado County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 140 lb/hr

State: CA -- California Emission type: particulates
Region: 38 -- El Dorado County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

EPA Emission Regulation Information Printout

State: CA -- California Emission type: particulates
Region: 38 -- El Dorado County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 10 lb/hr

State: CA -- California Emission type: SOx
Region: 38 -- El Dorado County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 200 lb/hr

State: CA -- California Emission type: SOx
Region: 38 -- El Dorado County APCD
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 2000 ppm in exhaust

State: CA -- California Emission type: particulates
Region: 39 -- El Dorado County APCD - Lake Tahoe Air Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: CA -- California Emission type: SOx
Region: 39 -- El Dorado County APCD - Lake Tahoe Air Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 0.8 % wt coal

State: CA -- California Emission type: SOx
Region: 39 -- El Dorado County APCD - Lake Tahoe Air Basin
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions = 500 ppm in exhaust

=====

State: CO -- Colorado Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: anthracite Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: CO -- Colorado Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: bituminous Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: CO -- Colorado Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: lignite Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: sub-bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.5 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 1.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.5 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: particulates
Applicability input range: 1.00 MMBtu/hr to 500.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.5 * \text{input} ^{-0.26} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.03 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: particulates
Applicability input range: 500.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
reduction = 90 %

State: CO -- Colorado Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: B Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.4 * \text{input} [10^6 \text{ Btu/hr}]$

State: CO -- Colorado Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: B Type of coal: -- all -- Last changed: 09/01/88
reduction = 70 %

EPA Emission Regulation Information Printout

State: CT -- Connecticut Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: CT -- Connecticut Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: CT -- Connecticut Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
allowed input = 1 % wt coal

State: CT -- Connecticut Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 1.1 * input [10⁶ Btu/hr]

=====
State: DE -- Delaware Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: DE -- Delaware Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.3 * input [10⁶ Btu/hr]

State: DE -- Delaware Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

=====
State: FL -- Florida Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: FL -- Florida Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

```

State: FL -- Florida                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10^6 Btu/hr]

```

```

State: GA -- Georgia                               Emission type: NOx
Applicability input range:      250.00 MMBtu/hr   to   99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --             Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10^6 Btu/hr]

```

```

State: GA -- Georgia                               Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to    10.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = 0.5 * input [10^6 Btu/hr]

```

```

State: GA -- Georgia                      Emission type: particulates
Applicability input range:      10.00 MMBtu/hr to      250.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.58 * input ^ -0.5 [10^6 Btu/hr]

```

```

State: GA -- Georgia                               Emission type: particulates
Applicability input range:      250.00 MMBtu/hr   to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --             Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

```

State: GA -- Georgia                      Emission type: SOx
Applicability input range:      0.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
allowed input = 2.5 % wt coal

```

```

State: CA -- Georgia                                Emission type: SOx
Applicability input range:      100.00 MMBtu/hr   to   99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --             Last changed: 09/01/88
allowed input = 3 % wt coal

```

```

State: IA -- Iowa                               Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to 150.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]

```

```

State: IA -- Iowa                      Emission type: particulates
Applicability input range:      150.00 MMBtu/hr to      250.00 MMBtu/hr
Group ID:                        Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.2 * input [10^6 Btu/hr]

```

EPA Emission Regulation Information Printout

State: IA -- Iowa Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.05 * \text{input} [10^6 \text{ Btu/hr}]$

State: IA -- Iowa Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $6 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: ID -- Idaho Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: ID -- Idaho Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

State: ID -- Idaho Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.05 grains / SCF exhaust

State: ID -- Idaho Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: ID -- Idaho Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: IL -- Illinois Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: IL -- Illinois Emission type: particulates
Region: 1 -- cook county
Applicability input range: 10.00 MMBtu/hr to 500.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} ^{-0.23} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: IN -- Indiana Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: IN -- Indiana Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: IN -- Indiana Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.09 * \text{input} ^{-0.26} [10^6 \text{ Btu/hr}]$

State: IN -- Indiana Emission type: particulates
Applicability input range: 10000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: IN -- Indiana Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $17 * \text{input} ^{0.67} [10^6 \text{ Btu/hr}]$

=====

State: KS -- Kansas Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.9 * \text{input} [10^6 \text{ Btu/hr}]$

State: KS -- Kansas Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: KS -- Kansas Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.026 * \text{input} ^{-0.233} [10^6 \text{ Btu/hr}]$

State: KS -- Kansas Emission type: particulates
Applicability input range: 10000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.12 * \text{input} [10^6 \text{ Btu/hr}]$

State: KS -- Kansas Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.5 * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: KY -- Kentucky Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.56 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.919 * \text{input} ^{-0.535} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 1 -- County Class I
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $5 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 1 -- County Class I
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $13.8781 * \text{input} ^{-0.4434} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 1 -- County Class I
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 2 -- County Class 1A
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $5 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 2 -- County Class 1A
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $7.0382 * \text{input} ^{-0.1485} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: KY -- Kentucky Emission type: SOx
Region: 2 -- County Class IA
Applicability input range: 250.00 MMBtu/hr to 1500.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 2 -- County Class IA
Applicability input range: 1500.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 3 -- County Class II
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $6 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 3 -- County Class II
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $11.9134 * \text{input} ^{-0.2979} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 3 -- County Class II
Applicability input range: 250.00 MMBtu/hr to 99999.90 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $2.3 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 4 -- Ounty Class III
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $7 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 4 -- Ounty Class III
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $11.9872 * \text{input} ^{-0.2336} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 4 -- Ounty Class III
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.5 * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: KY -- Kentucky Emission type: SOx
Region: 5 -- County Class IV
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $8 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 5 -- County Class IV
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $10.8875 * \text{input} ^{-0.1338} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 5 -- County Class IV
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $5.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 6 -- County Class IVA
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $8 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 6 -- County Class IVA
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $10.8875 * \text{input} ^{-0.1338} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 6 -- County Class IVA
Applicability input range: 250.00 MMBtu/hr to 1500.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $5.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 6 -- County Class IVA
Applicability input range: 1500.00 MMBtu/hr to 21000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.5 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 6 -- County Class IVA
Applicability input range: 21000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.1 * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: KY -- Kentucky Emission type: SOx
Region: 7 -- County Class V
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $9 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 7 -- County Class V
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $12.0284 * \text{input}^{-0.126} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 7 -- County Class V
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $6 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 8 -- County Class VA
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $9 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 8 -- County Class VA
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $12.0284 * \text{input}^{-0.0126} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 8 -- County Class VA
Applicability input range: 250.00 MMBtu/hr to 1500.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: KY -- Kentucky Emission type: SOx
Region: 8 -- County Class VA
Applicability input range: 1500.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: LA -- Louisiana Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: anthracite Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$


```

State: LA -- Louisiana                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: bituminous      Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10^6 Btu/hr]

```

```

State: LA -- Louisiana                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: lignite          Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]

```

State: LA -- Louisiana Emission type: NOx
 Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
 Group ID: Type of coal: sub-bituminous Last changed: 09/01/88
 emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: LA -- Louisiana Emission type: particulates
 Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

```

State: LA -- Louisiana                      Emission type: particulates
Applicability input range:  . 250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

```

State: LA -- Louisiana                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10^6 Btu/hr]

```

[illegible]

```

State: MA -- Massachusetts                      Emission type: particulates
Region: 1 -- City of Worcester
Applicability input range:      3.00 MMBtu/hr   to      250.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

```

State: MA -- Massachusetts                      Emission type: particulates
Region: 1 -- City of Worcester
Applicability input range:      250.00 MMBtu/hr   to   99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --           Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10^6 Btu/hr]

```

```

State: MA -- Massachusetts                Emission type:  particulates
Region: 2 -- All except Worcester
Applicability input range:      3.00 MMBtu/hr  to      250.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

EPA Emission Regulation Information Printout

State: MA -- Massachusetts Emission type: particulates
Region: 2 -- All except Worcester
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: MD -- Maryland Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 1 -- Western Maryland, (Allegany, Garrett, Washington Counties)
Applicability input range: 0.00 MMBtu/hr to 25.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.4 * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 1 -- Western Maryland, (Allegany, Garrett, Washington Counties)
Applicability input range: 25.00 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $(0.4 @ \text{low} -- 0.309 @ \text{high}) * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 1 -- Western Maryland, (Allegany, Garrett, Washington Counties)
Applicability input range: 50.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $(0.309 @ \text{low} -- 0.217 @ \text{high}) * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 1 -- Western Maryland, (Allegany, Garrett, Washington Counties)
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 2 -- Central Maryland comprising Frederick County
Applicability input range: 0.00 MMBtu/hr to 25.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.4 * \text{input} [10^6 \text{ Btu/hr}]$

State: MD -- Maryland Emission type: particulates
Region: 2 -- Central Maryland comprising Frederick County
Applicability input range: 25.00 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $(0.4 @ \text{low} -- 0.309 @ \text{high}) * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: MD -- Maryland Emission type: particulates
Region: 2 -- Central Maryland comprising Frederick County
Applicability input range: 50.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = (0.309 @ low -- 0.217 @ high) * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 2 -- Central Maryland comprising Frederick County
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 5 -- Southern Maryland Area (Calvert, Charles, St. Mary's Counties)
Applicability input range: 0.00 MMBtu/hr to 25.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.4 * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 5 -- Southern Maryland Area (Calvert, Charles, St. Mary's Counties)
Applicability input range: 25.00 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = (0.4 @ low -- 0.309 @ high) * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 5 -- Southern Maryland Area (Calvert, Charles, St. Mary's Counties)
Applicability input range: 50.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = (0.309 @ low -- 0.217 @ high) * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 5 -- Southern Maryland Area (Calvert, Charles, St. Mary's Counties)
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 6 -- Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester
Applicability input range: 0.00 MMBtu/hr to 25.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.4 * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 6 -- Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester
Applicability input range: 25.00 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = (0.4 @ low -- 0.309 @ high) * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: MD -- Maryland Emission type: particulates
Region: 6 -- Caroline,Cecil,Dorch.,Kent,QnAnne,Somerset,Talbot,Wicomico,Worc
Applicability input range: 50.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = (0.309 @ low -- 0.217 @ high) * input [10⁶ Btu/hr]

State: MD -- Maryland Emission type: particulates
Region: 6 -- Caroline,Cecil,Dorch.,Kent,QnAnne,Somerset,Talbot,Wicomico,Worc
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

=====

State: ME -- Maine Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.3 * input [10⁶ Btu/hr]

State: ME -- Maine Emission type: particulates
Applicability input range: 50.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.8 * input [10⁶ Btu/hr]

State: ME -- Maine Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

=====

State: MI -- Michigan Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 0.01 % in exhaust

State: MI -- Michigan Emission type: SO_x
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 2.4 * input [10⁶ Btu/hr]

State: MI -- Michigan Emission type: SO_x
Applicability input range: 0.00 MMBtu/hr to 500.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
allowed input = 1.5 % wt coal

State: MN -- Minnesota Emission type: NO_x
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: MN -- Minnesota Emission type: particulates
 Applicability input range: 0.00 MMBtu/hr to 100.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.4 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 1 -- Minneapolis-St. Paul
 Applicability input range: 0.00 MMBtu/hr to 100.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.4 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 1 -- Minneapolis-St. Paul
 Applicability input range: 100.00 MMBtu/hr to 250.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 1 -- Minneapolis-St. Paul
 Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: SOx
 Region: 1 -- Minneapolis-St. Paul
 Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 3 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: SOx
 Region: 1 -- Minneapolis-St. Paul
 Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 1.2 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 2 -- City of Duluth
 Applicability input range: 0.00 MMBtu/hr to 100.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.4 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 2 -- City of Duluth
 Applicability input range: 100.00 MMBtu/hr to 250.00 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: MN -- Minnesota Emission type: particulates
 Region: 2 -- City of Duluth
 Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
 Group ID: Type of coal: -- all -- Last changed: 09/01/88
 emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

```

State: MN -- Minnesota          Emission type: SOx
Region: 2 -- City of Duluth
Applicability input range:      0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 4 * input [10^6 Btu/hr]

```

```

State: MN -- Minnesota                      Emission type: particulates
Region: 3 -- Other
Applicability input range:      0.00 MMBtu/hr   to   250.00 MMBtu/hr
Group ID:      Type of coal: -- all --        Last changed: 09/01/88
emissions [lb/hr] = 0.4 * input [106 Btu/hr]

```

```

State: MN -- Minnesota                      Emission type: SOx
Region: 3 -- Other
Applicability input range:      0.00 MMBtu/hr   to      250.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 4 * input [10^6 Btu/hr]

```

[illegible]

```

State: MO -- Missouri                      Emission type: particulates
Region: 1 -- Greene County
Applicability input range:      10.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID: 1   Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 14.7 * input ^ -0.1743 [10^6 Btu/hr]

```

EPA Emission Regulation Information Printout

State: MO -- Missouri Emission type: particulates
Region: 2 -- Out state
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: MO -- Missouri Emission type: particulates
Region: 2 -- Out state
Applicability input range: 10.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 21.0084 * input ^ -0.1743 [10⁶ Btu/hr]

State: MO -- Missouri Emission type: SOx
Region: 3 -- St. Louis Metro (St. Louis, St. Charles, Jefferson, Franklin)
Applicability input range: 0.00 MMBtu/hr to 2000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
allowed input = 2 % wt coal

State: MO -- Missouri Emission type: SOx
Region: 3 -- St. Louis Metro (St. Louis, St. Charles, Jefferson, Franklin)
Applicability input range: 2000.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 2.3 * input [10⁶ Btu/hr]

=====

State: MS -- Mississippi Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 2.4 * input [10⁶ Btu/hr]

State: MS -- Mississippi Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 4.8 * input [10⁶ Btu/hr]

=====

State: MT -- Montana Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: MT -- Montana Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.35 * input [10⁶ Btu/hr]

EPA Emission Regulation Information Printout

State: MT -- Montana Emission type: particulates
Applicability input range: 100.00 MMBtu/hr to 1000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: MT -- Montana Emission type: particulates
Applicability input range: 1000.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.12 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: NC -- North Carolina Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: NC -- North Carolina Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.9 * \text{input} ^{-0.2594} [10^6 \text{ Btu/hr}]$

State: NC -- North Carolina Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $2.4 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: ND -- North Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: anthracite Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: lignite Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: sub-bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: ND -- North Dakota Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 249.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.811 * \text{input} - 0.131 [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: ND -- North Dakota Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: NH -- New Hampshire Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 100.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.3 * \text{input} [10^6 \text{ Btu/hr}]$

State: NH -- New Hampshire Emission type: particulates
Applicability input range: 100.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.15 * \text{input} [10^6 \text{ Btu/hr}]$

State: NH -- New Hampshire Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.3 * \text{input} [10^6 \text{ Btu/hr}]$

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: anthracite Last changed: 09/01/88
allowed input = 0.8 % wt coal

EPA Emission Regulation Information Printout

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: anthracite Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: bituminous Last changed: 09/01/88
allowed input = 0.2 % wt coal

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: lignite Last changed: 09/01/88
allowed input = 0.2 % wt coal

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: lignite Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: A Type of coal: sub-bituminous Last changed: 09/01/88
allowed input = 0.2 % wt coal

State: NJ -- New Jersey Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: sub-bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: NM -- New Mexico Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.45 * \text{input} [10^6 \text{ Btu/hr}]$

State: NM -- New Mexico Emission type: particulates
Applicability input range: 1.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.9615 * \text{input} ^{-0.2341} [10^6 \text{ Btu/hr}]$

State: NM -- New Mexico Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.05 * \text{input} [10^6 \text{ Btu/hr}]$

```

State: NM -- New Mexico                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.34 * input [10^6 Btu/hr]

```

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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State: NY -- New York                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10^6 Btu/hr]

```

```

State: NY -- New York                      Emission type:  particulates
Applicability input range:      1.00 MMBtu/hr  to      10.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]

```

```

State: NY -- New York                      Emission type:  particulates
Applicability input range:      10.00 MMBtu/hr  to      250.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = ( 0.6 @ low -- 0.31 @ high ) * input [10^6 Btu/hr]

```

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```

State: OH -- Ohio                      Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.4 * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type: particulates
Applicability input range:      10.00 MMBtu/hr to 20.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = ( 0.4 @ low -- 0.33 @ high ) * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type: particulates
Applicability input range:      20.00 MMBtu/hr to 40.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = ( 0.33 @ low -- 0.27 @ high ) * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type:  particulates
Applicability input range:      40.00 MMBtu/hr   to   100.00 MMBtu/hr
Group ID:      Type of coal: -- all --           Last changed: 09/01/88
emissions [lb/hr] = ( 0.27 @ low -- 0.2 @ high ) * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type:  particulates
Applicability input range:      100.00 MMBtu/hr  to    200.00 MMBtu/hr
Group ID:      Type of coal: -- all --           Last changed: 09/01/88
emissions [lb/hr] = ( 0.2 @ low -- 0.17 @ high ) * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type: particulates
Applicability input range:      200.00 MMBtu/hr to 400.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = ( 0.17 @ low -- 0.14 @ high ) * input [10^6 Btu/hr]

```

```

State: OH -- Ohio                               Emission type: particulates
Applicability input range:      400.00 MMBtu/hr to 1000.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = ( 0.14 @ low -- 0.1 @ high ) * input [10^6 Btu/hr]

```

```
State: OH -- Ohio                               Emission type: particulates
Applicability input range: 1000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]
```

22

```

State: OK -- Oklahoma                      Emission type: NOx
Applicability input range:      50.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10^6 Btu/hr]

```

```

State: OK -- Oklahoma                               Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to    10.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]

```

```

State: OK -- Oklahoma                               Emission type: particulates
Applicability input range:      10.00 MMBtu/hr  to   100.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = ( 0.6 @ low -- 0.35 @ high ) * input [10^6 Btu/hr]

```

```

State: OK -- Oklahoma                               Emission type: particulates
Applicability input range:      100.00 MMBtu/hr to 1000.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = ( 0.35 @ low -- 0.2 @ high ) * input [10^6 Btu/hr]

```

```

State: OK -- Oklahoma                               Emission type: particulates
Applicability input range:      1000.00 MMBtu/hr to 10000.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = ( 0.2 @ low -- 0.1 @ high ) * input [10^6 Btu/hr]

```

```

State: OK -- Oklahoma                               Emission type: particulates
Applicability input range: 10000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --              Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

```
State: OR -- Oregon                      Emission type: particulates
Applicability input range:      0.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust
```

```

State: OR -- Oregon                      Emission type: SOx
Applicability input range:      150.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.6 * input [10^6 Btu/hr]

```

```

State: OR -- Oregon                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10^6 Btu/hr]

```

```

State: OR -- Oregon                      Emission type: SOx
Region: 1 -- Clackamas, Columbia, Multinamoh, Washington
Applicability input range:              0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID:                               Type of coal: -- all --      Last changed: 09/01/88
emissions = 1000 ppm in exhaust

```

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```

State: PA -- Pennsylvania                      Emission type: particulates
Applicability input range:      2.50 MMBtu/hr to 50.00 MMBtu/hr
Group ID:      Type of coal: -- all --        Last changed: 09/01/88
emissions [lb/hr] = 0.4 * input [10^6 Btu/hr]

```

```

State: PA -- Pennsylvania                      Emission type:  particulates
Applicability input range:      50.00 MMBtu/hr  to      600.00 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 3.6 * input ^ -0.56 [10^6 Btu/hr]

```

State: PA -- Pennsylvania Emission type: particulates
Applicability input range: 600.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

```

State: PA -- Pennsylvania                      Emission type: SOx
Region: 1 -- Non-Air Basin
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 3.7 * input [10^6 Btu/hr]

```

```

State: PA -- Pennsylvania                      Emission type: SOx
Region: 2 -- Erie,Harrisburg,York,Lancaster,Scranton,Wilkes-Barre
Applicability input range:      250.00 MMBtu/hr   to   99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 3.7 * input [10^6 Btu/hr]

```

```

State: PA -- Pennsylvania                      Emission type: SOx
Region: 3 -- Allentown,Bethehem,Easton,Reading,Johnstown
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --          Last changed: 09/01/88
emissions [lb/hr] = 2.8 * input [10^6 Btu/hr]

```

EPA Emission Regulation Information Printout

State: PA -- Pennsylvania Emission type: SOx
Region: 4 -- Southeast PA air Basin - Inner Zone
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.75 * \text{input} [10^6 \text{ Btu/hr}]$

State: PA -- Pennsylvania Emission type: SOx
Region: 4 -- Southeast PA air Basin - Inner Zone
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.45 * \text{input} [10^6 \text{ Btu/hr}]$

State: PA -- Pennsylvania Emission type: SOx
Region: 5 -- Southeast PA Air Basin - Outer Zone
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.9 * \text{input} [10^6 \text{ Btu/hr}]$

State: PA -- Pennsylvania Emission type: SOx
Region: 6 -- Allegany Unty, Beaver Monogahela Valley Air Basins
Applicability input range: 2.50 MMBtu/hr to 50.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1 * \text{input} [10^6 \text{ Btu/hr}]$

State: PA -- Pennsylvania Emission type: SOx
Region: 6 -- Allegany Unty, Beaver Monogahela Valley Air Basins
Applicability input range: 50.00 MMBtu/hr to 2000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.7 * \text{input} - 0.14 [10^6 \text{ Btu/hr}]$

State: PA -- Pennsylvania Emission type: SOx
Region: 6 -- Allegany Unty, Beaver Monogahela Valley Air Basins
Applicability input range: 2000.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: RI -- Rhode Island Emission type: particulates
Applicability input range: 1.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: RI -- Rhode Island Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.55 * \text{input} [10^6 \text{ Btu/hr}]$

EPA Emission Regulation Information Printout

State: SC -- South Carolina Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $57.84 * \text{input}^{-0.637}$ [10^6 Btu/hr]

State: SC -- South Carolina Emission type: SOx
Region: 1 -- Charleston County
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.5 * \text{input}$ [10^6 Btu/hr]

State: SC -- South Carolina Emission type: SOx
Region: 1 -- Charleston County
Applicability input range: 10.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $2.3 * \text{input}$ [10^6 Btu/hr]

State: SC -- South Carolina Emission type: SOx
Region: 2 -- Class II - Aiken, Anderson Ct
Applicability input range: 0.00 MMBtu/hr to 1000.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.5 * \text{input}$ [10^6 Btu/hr]

State: SC -- South Carolina Emission type: SOx
Region: 2 -- Class II - Aiken, Anderson Ct
Applicability input range: 1000.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $2.3 * \text{input}$ [10^6 Btu/hr]

State: SC -- South Carolina Emission type: SOx
Region: 3 -- Class III - All others
Applicability input range: 0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3.5 * \text{input}$ [10^6 Btu/hr]

=====

State: SD -- South Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: anthracite Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input}$ [10^6 Btu/hr]

State: SD -- South Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input}$ [10^6 Btu/hr]

State: SD -- South Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: lignite Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input}$ [10^6 Btu/hr]

EPA Emission Regulation Information Printout

State: SD -- South Dakota Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: sub-bituminous Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: SD -- South Dakota Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: SD -- South Dakota Emission type: SOx
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $3 * \text{input} [10^6 \text{ Btu/hr}]$

State: SD -- South Dakota Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

=====

State: TN -- Tennessee Emission type: NOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$

State: TN -- Tennessee Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 10.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.6 * \text{input} [10^6 \text{ Btu/hr}]$

State: TN -- Tennessee Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $21.6148 * \text{input} ^{-0.5566} [10^6 \text{ Btu/hr}]$

State: TN -- Tennessee Emission type: particulates
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.1 * \text{input} [10^6 \text{ Btu/hr}]$

State: TN -- Tennessee Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $1.2 * \text{input} [10^6 \text{ Btu/hr}]$

State: TX -- Texas Emission type: NOx
Applicability input range: 600.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = $0.7 * \text{input} [10^6 \text{ Btu/hr}]$


```

State: TX -- Texas                               Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --           Last changed: 09/01/88
emissions [lb/hr] = 0.3 * input [10^6 Btu/hr]

```

```

State: TX -- Texas                      Emission type: SOx
Region: 2 -- Milan County
Applicability input range:      0.00 MMBtu/hr   to   99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 4 * input [10^6 Btu/hr]

```

```

State: US -- United States           Emission type: particulates
Applicability input range:      100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10^6 Btu/hr]

```

```

State: US -- United States          Emission type: SOx
Applicability input range:         100.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: A    Type of coal: -- all --    Last changed: 09/01/88
reduction = 90 %

```

```

State: VT -- Vermont                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.00 MMBtu/hr
Group ID:      Type of coal: lignite      Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]

```

```

State: VT -- Vermont                      Emission type: particulates
Applicability input range:      0.00 MMBtu/hr to      10.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.5 * input [10^6 Btu/hr]

```

```

State: VT -- Vermont                      Emission type: particulates
Applicability input range:      10.00 MMBtu/hr to      100.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = ( 0.5 @ low -- 0.18 @ high ) * input [10^6 Btu/hr]

```

```

State: VT -- Vermont                      Emission type: particulates
Applicability input range:      100.00 MMBtu/hr  to   1000.00 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = ( 0.18 @ low -- 0.1 @ high ) * input [10^6 Btu/hr]

```

```
State: VT -- Vermont                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10^6 Btu/hr]
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State: WA -- Washington                      Emission type: particulates
Applicability input range:      0.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions = 0.1 grains / SCF exhaust

```

[illegible]

```

State: WI -- Wisconsin                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10^6 Btu/hr]

```

```
State: WI -- Wisconsin                      Emission type: NOx
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: lignite          Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10^6 Btu/hr]
```

```

State: WI -- Wisconsin                      Emission type: particulates
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10^6 Btu/hr]

```

```

State: WI -- Wisconsin                      Emission type: SOx
Applicability input range:      250.00 MMBtu/hr  to  99999.99 MMBtu/hr
Group ID:      Type of coal: -- all --      Last changed: 09/01/88
emissions [lb/hr] = 1.2 * input [10^6 Btu/hr]

```

EPA Emission Regulation Information Printout

State: WI -- Wisconsin Emission type: SOx
Region: 1 -- Southwest WI
Applicability input range: 0.00 MMBtu/hr to 250.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions = 1.1 lb/million Btu input

=====

State: WV -- West Virginia Emission type: particulates
Applicability input range: 10.00 MMBtu/hr to 1200.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.05 * input [10⁶ Btu/hr]

=====

State: WY -- Wyoming Emission type: NOx
Applicability input range: 0.00 MMBtu/hr to 0.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.7 * input [10⁶ Btu/hr]

State: WY -- Wyoming Emission type: NOx
Applicability input range: 0.00 MMBtu/hr to 0.00 MMBtu/hr
Group ID: Type of coal: lignite Last changed: 09/01/88
emissions [lb/hr] = 0.6 * input [10⁶ Btu/hr]

State: WY -- Wyoming Emission type: particulates
Applicability input range: 0.00 MMBtu/hr to 0.00 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.1 * input [10⁶ Btu/hr]

State: WY -- Wyoming Emission type: SOx
Applicability input range: 250.00 MMBtu/hr to 99999.99 MMBtu/hr
Group ID: Type of coal: -- all -- Last changed: 09/01/88
emissions [lb/hr] = 0.2 * input [10⁶ Btu/hr]

Appendix C: Listing of Regions Defined for Emission Data

Region Listing for: AL - Alabama

Region	Description
1	Category I County or Jefferson
2	Category II Counties

Region Listing for: CA - California

Region	Description
1	Mariposa County APCD
2	Tuolumne County APCD
3	Northern Sierra AQMD
4	Tulare County APCD
5	North Coast Air Basin
6	Madera County APCD
7	Kern County APCD - Valley Basin
8	Kern County APCD - Desert Basin
9	County of Siskiyou APCD
10	Modoc County APCD
11	Imperial County APCD
12	Placer County APCD
13	Sutter County APCD
14	Shasta County AQMD
15	Tehama County APCD
16	Calaveras County APCD
17	Colusa County APCD
18	Great Basin Unified Unified APCD
19	Yolo-Solano APCD
20	Yuba County APCD
21	San Bernardino APCD
22	Lassen County APCD
23	North Coast Unified AQMD
24	Sacramento County APCD
25	King County APCD
26	Butte County APCD
27	Ventura County APCD
28	South Coast AQMD
29	Northern Sonoma County APCD
30	Mendocino County APCD
31	San Luis Obispo County APCD
32	San Joaquin County APCD
33	Merced County APCD
34	Monterey Bay Unified APCD
35	Bay Area AQMD
36	Glenn County APCD
37	Stanislaus County APCD
38	El Dorado County APCD
39	El Dorado County APCD - Lake Tahoe Air Basin

Region Listing for: IL - Illinois

Region	Description
1	Cook County

Region Listing for: KY - Kentucky

Region	Description
1	County Class I
2	County Class IA
3	County Class II
4	County Class III
5	County Class IV
6	County Class IVA
7	County Class V
8	County Class VA

Region Listing for: MA - Massachusetts

Region	Description
1	City of Worcester
2	All except Worcester

Region Listing for: MD - Maryland

Region	Description
1	Western Maryland, (Allegany, Garrett, Washington Counties)
2	Central Maryland comprising Frederick County
3	Baltimore Metro (Balt. Anne Arundel, Carroll, Harford, Howard)
4	Washington Metro (Montgomery and Prince George Counties)
5	Southern Maryland Area (Calvert, Charles, St. Mary's Counties)
6	Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester

Region Listing for: MN - Minnesota

Region	Description
1	Minneapolis-St. Paul
2	City of Duluth
3	Other

Region Listing for: MO - Missouri

Region	Description
1	Greene County
2	Out state
3	St. Louis Metro (St. Louis, St. Charles, Jefferson, Franklin)

Region Listing for: OR - Oregon

Region	Description
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1	Clackamas, Columbia, Multinamoh, Washington
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Region Listing for: PA - Pennsylvania

Region	Description
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1	Non-Air Basin
2	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre
3	Allentown, Bethehem, Easton, Reading, Johnstown
4	Southeast PA air Basin - Inner Zone
5	Southeast PA Air Basin - Outer Zone
6	Allegheny Ounty, Beaver Monogahela Valley Air Basins

Region Listing for: SC - South Carolina

Region	Description
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1	Charleston County
2	Class II - Aiken, Anderson Ct
3	Class III - All others

Region Listing for: TX - Texas

Region	Description
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1	Entire State except Milan County
2	Milan County

Region Listing for: WI - Wisconsin

Region	Description
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1	Southwest WI
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